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Designed to improve all Classes interested in Soil Culture

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November.

"And now with Autumn's moonlit eves,
Corn's harvest time has come;
We pluck away the frosted leaves,
And bear the treasure home.

Where the wide old kitchen hearth
Sends up its smoky curls,
Who will not thank the kindly earth
And bless our corn-fed girls!

Let earth withhold her goodly root,
Let mildew blight the rye,
Give to the worm the orchard's fruit,
The wheat field to the fly:

But let the good old crop adorn
The hills our fathers trod;
Still let us for this Golden Corn
Send up our thanks to God!"

WHITTIER'S HUSKERS.

"THANKSGIVING DINNER."

Who, of the millions of farmers in our land, will not say Amen to the aspiration of the poet! The corn harvest, the last of the cereals, is mostly gathered, and with it there comes a fitting pause for reflection and thanksgiving. All over the land, from the wooded valley of the Aroostook, to the bottom lands of the Delta of the Mississippi, the yellow ears have been stripped of their husks, and stored in cribs, and barns. Probably a thousand millions of bushels have been harvested, and put in store for the various purposes of the farmers—some to be loaded into the wagon, and sent off to the market town, to pay off old scores, or to make new purchases of home comforts for wife and children—some to be transmuted into pork and beef for home consumption, and other some to be ground into the golden meal to make all the delicious dishes, into which this favorite article enters.

A native product of our continent, and flourishing over a broader belt of country than any other cereal, more generally cultivated, and adapted to a greater variety of uses than any other grain, it is meet that we should sing the praises of Indian corn, and give thanks for it, and its accompanying blessings. It was the custom of our New-England fathers, when this crop was gathered in, to keep a social and religious festival, under the name of Thanksgiving. It was the most joyous day in the Puritan year, the season of family reunions, and good cheer. The absent son and daughter in the city, with their little ones, then returned to the old homestead, once more to greet the mother that bare them, and to receive the blessing of their grey haired sire. Those were happy days, when the old family circle, with many new links, was reconstructed, and the aged couple were permitted to look around upon children's children, and to rejoice in their welfare.

For many years this honored custom was confined to New-England, and her sons and daughters removing West and South found nothing in their new homes at this genial season of harvest, to remind them of the East. The mass was not yet leavened, and the times were not ready for a national Thanksgiving. Gradually the institution passed the Hudson and the Delaware, the Potomac and the Missouri, until now, with few exceptions, it has become an established usage in all the States. It is worthily perpetuated, for its social and religious ends. A score or more of the States will keep the festival this month.

And of all classes in this wide spread land, none have more occasion for gratitude to the Author of life, and all its blessings, than our rural population. We who have permanent possession of our homes, and can look out over broad acres, and call them ours, and point to lofty oaks and elms with the growth of centuries in their boughs, and say these monarchs of the wood are our possession, have no occasion to envy the luxurious lot of the citizen, who dwells in hired houses, is ministered unto by hired servants, does business in a hired establishment, is followed to his grave by hired mourners, and whose bones are thrust out of their hired sleeping place to make room for a new street or a new hotel.

We have the most healthful occupation in the world, the green fields and the free air ever around us. Our climate is indeed changeable, and severe in its influence upon those who are reckless of health. But for those who will adapt themselves to its peculiarities, and live soberly, and industriously, there is no better climate in the world than can be found in most parts of our country. There is something exhilarating to the nervous system in our brilliant skies and fresh breezes. The restless activity of the American character is no doubt in some measure owing to the quality of our atmosphere.

Then we have, what is wanting in the populous countries of Europe, cheap land. It is so abundant and cheap, even in the older States, that almost any industrious man can, in a few years, earn more acres than he can till. We have every where this material basis of happiness within our reach. The man of willing heart and strong arm can rear his home upon his own free acres, and rejoice in the full reward of his toil. To appreciate this blessing we have only to visit lands where the rent of the soil, annually, is two or three times more than its whole cost with us. The poor landless emigrant of ten years ago is now the proprietor of his quarter section—a cleared farm, on which are the comfortable dwelling and out buildings, with herds of cattle and flocks of sheep.

Our country is the paradise of the poor. If land is cheap, *labor* is dear, and all who have that commodity to sell, as their only fortune, can dispose of it to the best possible advantage. The rudest kind of labor is in demand, and every one who can lift a hoe or use a spade, can have plenty of bread as soon as his foot touches our shores. He leaves behind squalid misery, and homeless mendicants, to take his lot in a land where every native is ashamed to beg.

Then, this labor, which is so abundantly rewarded, is not over burdened with taxes. The inevitable tithes, which go to the support of an established religion, in many lands, are here all self imposed, and no man pays for preaching or pastoral labor, which he does not enjoy. There are many rural communities, numbering thousands, whose whole tax for town and State purposes, does not equal as many dollars. When it is remembered that in some countries, the taxes eat up from one fourth to a half of the avails of industry, this fact will be appreciated. It should also be appreciated, when contrasted with the heavy burdens laid on tax-payers in large cities.

Then, we have as the rich inheritance of every American citizen, our civil and religious institutions—no capricious will of a despot forced upon

us at the point of the bayonet, no compulsory acquiescence in a creed that both head and heart reject. Here, every right is guarded by constitutional law, and protection is extended to reputation, property, and person. Here, every man interprets the Bible for himself, and holds himself accountable alone to God for his religious opinions. This freedom is no doubt sometimes abused to license and infidelity, but this is an evil, infinitely less than the half smothered infidelity of an established church, and the grinding despotism of a hierarchy.

In the possession of all these rich blessings, we come to the close of the harvest, and the annual THANKSGIVING. Whose heart does not swell with gratitude to God, as he remembers his American birthright, if he be free born, or his adoption into this favored family, if he have come from abroad! The year has been full of blessings, and the husbandman has more occasion than all for praise. His harvests have been abundant. His barns are filled with hay and grain, his bins with wheat, his cribs with the golden corn, his stalls with sleek cattle, and his sheds with the peaceful flocks. With a glowing heart he may well exclaim in the beautiful language of the Hebrew poet:

"Thou crownest the year with thy goodness; and thy paths drop fatness.

They drop upon the pastures of the wilderness; and the little hills rejoice on every side.

The pastures are clothed with flocks; the valleys also are covered over with corn; they shout for joy, they also sing."

Calendar of Operations for November, 1859.

[We note down sundry kinds of work to be done during the month, not so much to afford instruction to practical men, as to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the North, later for the South.

EXPLANATIONS.—*f* indicates the *first*; *m* the *middle*; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signifies that the work may be done in either or in both periods indicated; thus, work marked *fm*. indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

November is the finishing month of the season. Indeed very little farm work, save digging and storing the late turnips, should be left until now. In some localities a portion of the corn is still unhusked, and the grain not all threshed. Both of these need early attention, and then, having put all the tools away, so that no unlooked for snow shall bury one here and another there, and having repaired the buildings against the biting wind and frost, the farmer may rest quietly even if the sleet comes driving against his window at night. He is *prepared* for Winter.

Buildings, including those for man and beast, should be put in complete Winter order at once. This is one of the best months for outside painting of buildings and fences. See more full directions of last month.

Cattle are now almost solely dependent upon man for their food at the North: let it be given them with regularity, just sufficient for their wants, but none to waste. A good hay or straw cutter should be in every barn, and if capable of cutting corn stalks, so much the better. For twenty or thirty cattle and pigs, a steaming apparatus will pay. Complete fattening the beeves as early as possible, before half the food is exhausted in keeping them warm. Give all animals a good bedding of some sort, both to promote comfort and increase the manure heap.

Cellars—Keep ventilated as late in the season as can be done with safety. See that the water drain is perfect. Towards the close of the month, make everything secure against frost.

Cisterns and Wells for house and barn may well be built, f, m, if not already provided.

Corn—If any is standing, cut it up, ff. Finish husking as soon as possible, before cold weather and Winter rains set in. Save the fodder with care, and put away the husked corn where it will dry thoroughly. Seed should have been saved last month. If omitted, *select* it at once.

Draining is always in season, when the ground is not frozen or wet, until all swales, swamps, or low grounds are made the most productive portions of the farm.

Forest Leaves—Continue the gathering commenced last month until all that can be gathered, are stored for Winter bedding of stock, for which they are excellent, as well as for manure.

Fruit—The late apples and pears must now be taken to the cellar, as a cold snap might freeze them. Keep *dry* and as cool as convenient without freezing.

Grain—Thresh the remaining as fast as practicable, and save *all* the straw to feed or bed with through the Winter: it will be needed this year. Cut straw, moistened and mixed with Indian meal, forms excellent feed for cattle and horses. See that the best grain is kept for seed.

Hedges—Plant deciduous, ff, m, if the soil is dry; otherwise leave till Spring.

Hogs—As with beeves, complete their fattening early. This will be the killing month in many parts of the country; let the animals be *fat* when slaughtered. Provide for early pigs by turning a male among the breeding sows, m, ll.

Horses and Mules—Feed with cut hay and straw, adding a little meal or carrots. Have them well shod as icy weather approaches, at the North. Provide blankets and *use* them. Give a good bedding at night. If standing on a plank floor, cover with several inches of muck, spent tan or sawdust both to absorb the moisture and make a soft standing place. Ventilate well, using plaster to take up the strong smelling ammonia.

Ice Houses—See that they are all ready to receive the first thick ice of the season, which is usually the best. It is not too late to construct ice-houses or rooms.

Indoor—The long evenings and stormy days give an opportunity to read and think. Get down the back numbers of the *Agriculturist* and re-read those articles which a more hurried season caused to be lightly pondered at the time. Sympathize with the children as they pore over their evening lessons, and lend them the assistance they require. A little interest in their studies will be of material benefit to them. Make home so attractive that they prefer it to going abroad where they may meet with vicious companions.

Manures—Follow the directions of last month, adding large quantities of muck, tan, leaves, loam, saw-dust, etc., to the contents of the yards and stables.

Permanent improvements may now be made to good advantage, while waiting the approach of Winter. A few rocks need sinking or blasting; stumps may be removed; stones may be picked up and laid into permanent fences, hedges cleared up, etc. These labors can profitably use up all the spare time.

Plow clayey lands just before the Winter sets in. Insects will be turned up to frost, and the freezing and thawing of the tops and sides of the furrows will pulverize the soil.

Poultry—Provide them with warm quarters for Winter. A barn or other cellar where they can have gravel to scratch in, is desirable, allowing them access to the sun. Give them animal food, refuse meat, with boiled potatoes and raw cabbage. Keep roosts clean. See article on fattening poultry on a subsequent page.

Pumpkins—Feed out freely to fattening animals and milch cows. Put some of the best in a dry place and beyond the reach of frost, for Winter keeping.

Schools are about commencing for the Winter, in many places. Have the out door work in condition to spare the boys at the *beginning*, to take their places at once in classes. Nor should they be kept at home except on important occasions. Regularity is essential to progress.

Sheep still find some green food in the pastures, but will soon need a foddering at night, in colder localities. Let them begin Winter in good flesh. Where early lambs are desired, turn the buck with the ewes, say, m, l.

Stack Yards—Instead of making them *cattle yards*, save time, labor, and your reputation for humanity, by carting the contents to the barn to be fed under cover.

Sugar Cane—Complete the cutting and manufacturing, ff. If it can not be evaporated sufficiently fast, put some of the stalks under cover, to be ground and boiled down as needed. A moderate freezing does little injury when syrup only is made.

Tools, Implements, Carriages, Harness, Sleighs, Sleds, etc.—Put away those no longer wanted, first repairing the broken ones. Do not leave a plow to freeze in the furrow, nor any tools to be covered by a premature snow. Have the harness cleaned and oiled, and put sleighs and sleds in running order.

Turnips—Dig the remaining crop, m, l, also any carrots left out until now. Store them in pits as described in the "basket," or put in cellars beyond the reach of frost.

Water pipes—Give an extra covering, ll, where there is danger of freezing.

Winter Grain—Permit none of it to be eaten off at this season. The late growth is needed to protect the roots. See that no water stands, or can stand on the field.

Wood for fuel, especially "down stuff," may be collected and piled this month much better than after a covering of snow. Pile it convenient to load upon a sled, or cart it home upon wheels while the traveling is good

Orchard and Nursery.

Gather late apples and pears still hanging upon the trees, ff, and then having scraped off the rough bark, manured and dug over or plowed the ground, there is little to do in the orchard until Spring. In the nursery, however, the tree grower is now in the hight of his semi-annual harvest, and we hope very busy in taking up, packing, and sending away trees and shrubs, as well as in planting stocks and putting every thing in Winter order.

Apples—Plant trees, ff, m, both for a new orchard and to fill vacancies in the old. Set fruit trees also along the lanes, avenues and road-sides, planting Winter varieties in exposed situations.

Cherry Trees may now be set in this latitude and south. We prefer Spring planting at the North, on account of a liability to Winter kill.

Cider—Finish making before apples freeze or decay, and put the juice in clean sweet casks with an open vent.

Fruit—Gather, ff, any still upon the trees. Examine pears upon the fruit shelves, as they do not keep long after fully ripening. Keep apples in a dry airy place until severe weather, when they must go into Winter quarters. No fruit keeps well in a *damp* atmosphere.

Grapes—This (ff,) is one of the best seasons to plant grape vines. Cover the tops lightly for Winter protection, and lay down tender varieties from the arbors and trellises. Even the Isabella and Catawba do better when laid upon the ground during Winter—a light covering is still better. This is the pruning month for the vine. See full directions on page 337. Make cuttings for planting while pruning.

Insects—Complete the destruction of borers and scale, that there be no stock to begin with next season.

Manure both orchard and nursery, adding lime or ashes to the compost. Manure applied now is washed into the soil during the Winter, and is ready to be taken up by the roots in the Spring.

Mice—Bank up about exposed trees, or cover the lower part of the trunks with tea-chest lead, tarred cloth or paper. Good cats are about the best protectors.

Nursery Rows—As soon as you are done taking up trees, go through with a plow and turn furrows *towards* the trees both to protect them, and open drains to carry off surplus water. Transplant as many as possible of the seedlings this Fall.

Orchard—After planting out the new trees, doctor the old to keep up their usefulness awhile longer. Scrape off rough bark, cut away dead branches, and above all dig in a good coat of manure about the roots—not for 3 feet merely, but over a circle of 10 feet each way from the trunk.

Pear Trees especially need thorough manuring. A mulch of coarse manure spread over the roots to be forked in early in Spring, serves a double purpose. Plant more trees of select kinds.

Pruning—If not attended to in the Summer, better do it now than next Spring. In warm climates, the present is a good pruning month.

Quinces—Plant trees, ff, m, and gather fruit now upon the trees, making a portion into jelly and marmalade, and putting more into air-tight cans or bottles.

Scions—Cut at any time this month, when not frozen, and bury in dry earth, either out doors, or in the cellar.

Seeds of Apples, Pears, Quinces, Plums, Cherries, Peaches, and the various nuts and hard shelled seeds—if not already in, plant. ff, m, as directed last month.

Selling Nursery Trees—See that only good trees, true to name, are sent out properly labeled and packed. Better burn a poor tree than sell it for half price.

Stocks—Transplant all the hardy ones into nursery rows. You can spare the time better now than in Spring. Others may be heeled in over Winter.

Tender Seedlings, especially evergreens, need some protection in the nursery. Sift in dry sand to protect the stems, and cover with forest leaves, straw, or evergreen boughs, for the first Winter.

Kitchen and Fruit Garden.

In the ordinary farm garden there is something yet to do, while the market gardener will find plenty of work, in finishing the labors of the present season and preparing for the next.

Asparagus—Plant new beds, ff, m and sow seed. Cover the beds, m, l, with several inches of coarse manure.

Bean and Hop Poles, Raspberry, Blackberry and other Stakes—Collect and store under cover for another season.

Beets bear but little freezing, harvest, ff.

Blackberries do best planted early, although they may be set as long as the ground is open.

Cabbages and Cauliflowers—Harvest the remainder and store in Winter quarters, m, l. Place the young plants in cold frames, as directed below.

Carrots—Dig and store the remaining crop, f, m.

Celery—Continue to earth up, ff, in dry weather. Harvest, m, l, and cover in trenches, or better on level ground, standing it upright.

Cold Frames—Have in readiness, ff, and set in them, f, m, the cabbage, cauliflower, lettuce plants, etc., requiring Winter protection. Cover with glass or shutters during cold nights, but keep open by day as long as the weather will admit. When Winter sets in cover securely, banking up about the sides, and put straw, leaves, etc., over them to exclude frost. Open for a short time every mild day during Winter.

Compost and Manures for Spring use—Prepare a good supply as opportunity offers.

Currants and Gooseberries—Plant roots, ff, m. Make cuttings and prune old bushes. Remove a portion of the earth from bushes preyed upon by insects and replace it with distant fresh soil and compost. The larvæ will thus be destroyed or hatch where they will do less injury. Manure the plants both to enrich and mulch them.

Drain and trench stiff heavy soils to facilitate early working in Spring. They may be planted a week earlier, if thoroughly drained, besides standing drouth better.

Figs—Bank up about the trunks and bend and cover the branches with earth, straw, or evergreen brush.

Fruit Trees—Plant in all suitable places as directed under "Orchard."

Grape Vines—Plant roots and layers, ff, m. Prune, at the same time making cuttings. Lay tender sorts upon the ground and cover with earth. Every garden should have a few vines.

Mice rarely trouble the vegetables left in the ground over Winter, if no rubbish is at hand for them to harbor in or bury beneath. Set traps or poison in cold frames.

Mushroom Beds may still be made, ff, m, in the cellar, or under cover. Examine former beds, protecting those in the open air from frost.

Onions—Cover, m, those left in the ground over Winter.

Parsneps, salsafy and scorzonera (black salsafy), are apparently improved by freezing in the ground. Dig, m, l, only what are wanted while the ground is frozen, and cover them with earth in the cellar.

Raspberries—Plant out, ff, and bury canes of tender sorts, f, m.

Rhubarb—Set roots and crowns, ff. m. Cover with coarse manure to enrich the soil and mulch the roots.

Spinach—Cover with straw, sedge, or evergreen boughs, m, l, previously hoeing and thinning the plants.

Squashes—Carry to a dry cellar, or room where they will not freeze, before severe weather. The Hubbard, and even the marrow variety may be kept until near Spring—the former until quite that time. Save seeds.

Strawberry Beds—Cover lightly with manure, as a partial protection and to enrich the soil.

Turnips—Harvest, m, to l, according to the climate. Let them grow until there is danger of freezing.

Flower Garden and Lawn.

Put every thing in neat order to preserve all the attractions possible during the Winter. One of the first things will be to take in the remaining plants which are too tender to be wintered out of doors.

Anemones and Ranunculuses do better when covered during the Winter with coarse manure, or forest leaves.

Bedded Plants—Lift, ff, and put in pits, or take to the houses, choice geraniums, carnations, petunias, fuchsias, salvias, verbenas, etc.

Bulbs—If still out of ground, plant, ff, hyacinths, crown imperials, tulips, crocuses, snow-drops, etc. They will bloom better for having a good coating of coarse manure and leaves during Winter. Pot a few for flowering in-doors.

Chrysanthemums—See illustration and article on page 340. They are now almost the only plants in bloom. Transplant, ll.

Climbers—Most of these, like the clematis, ivy, honeysuckle, climbing rose, etc., come out fresher in Spring when taken from trellises and laid upon the ground. A light covering of earth, straw, or leaves, will still further protect them.

Dahlias. Gladioli, tuberose, etc., should be taken up as soon as killed by frost. Label and pack in boxes of dry sand in the cellar, or where they will not freeze.

Flower stalks and rubbish of all kinds should be removed from the grounds; walks, beds and lawn raked, that clean, neat premises may always welcome the sight.

Frames and Pits—Place all the plants intended for these in their proper places, f, m. Admit air until hard frosts, when they should be covered as directed for "Cold Frames" under the "Kitchen Garden."

Hedges may still be planted, ff. Leave evergreen hedges until next Spring.

Lawn—Give a coating of fine manure to protect the roots and enrich the soil.

Ornamental Work, such as Vases, Baskets, Urns, Wire Work, etc., should now be stored under cover. Repaint those needing it.

Perennials, such as pæonies, dicentra, hollyhocks, foxglove, etc., can now be separated and replanted. They will do better than when transplanted in the Spring.

Roses—Plant, ff, m. Take down climbing and pillar sorts, and cover all tender ones with a few inches of soil. Those in pots should now be returned to the house or conservatory.

Shrubs and Ornamental Trees—Plant, ff, m, in appropriate places upon the lawn. They usually give the finest effect when set in clumps or masses.

Tender shrubs and small Trees require some Winter protection. Strawing up is usually practiced, but branches of evergreens set up about them and drawn in with twine, answer an excellent purpose.

Green and Hot Houses.

These should now be in thorough repair, well stocked, and the collections intended for forcing supplied with stove heat. The most that is requisite is to keep an even temperature, air freely, and water occasionally.

Annuals sown last month are now ready for potting.

Bulbs—Put a few in the curiously shaped pots shown on page 21 of this volume, (Jan. No.) ff, and place them in a warm situation for forcing. Others may be kept in a cooler location to succeed them.

Camellias are beginning to push out anew, and some of the flower buds are well swollen. Syringe and water more freely, giving them light and air.

Chrysanthemums and other plants brought in flower from the borders, require some heat and water.

Fires—Start them only as needed among the tender plants, and those to be forced. A little heat may be necessary to dispel the fogs and damps of this season from hardy collections even.

Grapes—Prune and lay down, or tie up vines which have ripened their wood. Give them a season of rest now. If the roots are in an outside border, cover it with manure, straw, etc.

Insects—Keep them down by syringe, and with tobacco fumes. It is far better and much easier to keep them in check, than to exterminate them after they have got a strong foothold.

Pots, Tubs, and Boxes containing growing plants, should be frequently examined. Keep the drainage open, remove weeds and moss, loosen the soil and, add liquid manure or rich earth to those plants which are flagging. Prune or pinch to a good form, and have them all arranged in a convenient handsome order—the lower growing varieties in front.

Roses—Many of these have been brought from the borders while in bloom. Strive to keep them so, by proper warmth, as there will now be a dearth of flowers.

Soil for Potting—Have a large quantity mixed under cover, and in readiness for use.

Verbenas, Petunias and Pelargoniums—Make provision for increasing the stock of plants. Shift a few to blooming pots, and place near the flues for forcing.

Water—As few of the plants are now growing rapidly, only moderate waterings will be needful.

Apiary in Nov.

BY M. QUINBY.

When bees are properly managed, there is less to be done this month than any other. They do not even require the attention that is necessary in the Winter months. The first severe freezing seems to chill them more than the severity of January, and any one that was deterred from making thorough examinations of his stocks through fear had better take advantage of this period to effect it. Such as can not be wintered for want of stores, or bees, had better be taken up even now. The benevolence that would avoid taking the lives of bees now, and then allow them to starve, or freeze on account of the smallness of the colony before Spring, is sadly misdirected.... There are often many neglected jobs about the Apiary, that should now be attended to. The surplus empty boxes that are left on the hives should be removed to some dry place before they become moldy or rusty. If put where the mice have access to them, set the holes downward, to keep them from the inside. When the bees are not to stand out through the Winter, the holes in the top of the hives may be closed, and the covers to the glass boxes not in use should be put under shelter. The weather affects them more while lying idle, than during all the time they are really in use.... Perhaps in the absence of much necessary work, it might be well to get the hives for another year ready. Such hives as are to receive a coat of paint, can not have it put on too long beforehand, that the rank smell may all pass off. There is much reason to believe from the frequency that bees desert newly painted hives, that it is in consequence of the disagreeable odor... It is not my province to dictate in this place, what hive shall be used, yet a little advice may be acceptable to beginners. First. Let there be no divisions in the apartment used for brood and Winter stores—It should be sufficiently large for both purposes. An arrangement for receiving the surplus honey should be combined with *any hive*—the top seems to be the proper place, as bees work more readily there than at the side. Whenever urged to buy a patent hive, and as an inducement to do so, you are told that in consequence of its peculiar shape, bees will collect fabulous quantities of honey, you had better signify your incredulity, or decline the purchase. One hive possesses no advantages over another in this respect, if the apartment is sufficiently spacious, and allows the bees to work in their natural order. They will collect as much honey in a flour barrel as anything. The improvements in a bee-hive can be only in the facility of managing the bees, dividing the surplus honey from the Winter stores, examining the interior, and remedying any defect that appears, thus prolonging the existence of the stock, etc., thereby indirectly increasing the product of honey.

Breeding In-and-In.

BY A CATTLE BREEDER.—NO. V.

To Mr. Clay's extended reply to my last communication I have not much to say, as no new line of argument or additional matter to what he has before asserted is set forth. It is not at all probable that either of us will convince the other that he is foiled in his argument, or mistaken in his position. To one remark in Mr. C's. last, let me refer, viz.: the close breeding—as he prefers that term—of the human family. That was introduced by Mr. Clay, after my comments on his article in the Ohio Farmer—not by me. I denied, from the first, its *immediate* analogy to the *brute* creation, from the superior *mental* organization of humanity over the other; and what I have remarked in relation to the human family has been incidentally, rather than directly, and it stands for what it is worth, as the illustration of a *general principle* in animal physiology.

Mr. Clay will excuse me from entering upon the controverted questions of the superiority, or inferiority, of different existing families, or bloods of imported, or *improved* stock, touched upon in his last, as they are not necessarily connected with our subject, and their discussion would be of no particular edification to the public.

Where we do not agree as to matters of fact, or record, we still must disagree, denying the correctness of each other's premises and authority. Our readers must judge between us, and draw their own conclusions, as the reassertion of our previous statements or positions will probably not convince a single reader who has reasoning powers of his own. Therefore I will close the subject on my part with a few general remarks and illustrations.

I consider it to be perfectly well established in the human family, that where persons, diseased, either constitutionally from birth, or chronic, by accident, neglect, exposure, or other cause, produce children, those children will in a majority of cases inherit such disease to more or less extent. It may not appear for many years, perhaps not at all, unless some extraordinary exposure or accident draws it out, or develops it. Still such disease is latent in the system. Consumption is among such diseases, although generally supposed to arise solely from exposure, and the contraction of heavy cold in the system. Scrofula, of various kinds, more or less virulent, is another, and among the most insidious of diseases—scarcely to be eradicated at all. Syphilis, even, has been perpetuated for several generations in families, by descent only; and prominent instances of the fact are seen in some of the fragmentary tribes of Indians still living in our older settlements, the majority of those on whom the curse is entailed, dying years before the meridian of life is attained, so neglectful have they been of medical treatment, and wholesome living. And all these diseases exist, have existed, and will exist irrespective of whether the intermarried be cousins, or any other degree of consanguinity, or entire strangers in blood and locality, until brought into personal relations with each other.

Yet, as I have before observed, imagination, association, sympathy, and the various mental qualities with which man is endowed, may, and unquestionably do affect, more or less, his offspring, from the moment of conception to that of birth, and even afterwards, drawn from the breast of the mother into the child, and in its physical organization made a part of its constitution and nature. Man thus is a compound of animal and mind, each acting through its natural organization on the other, according to their separate and individual strength, and so molding the character of both body and intellect to an extent of which the brute is physically incapable. The instances I have already given of the merely animal functions of the human family being damaged by the intermarriage of blood relations under favorable circumstances, have fully substantiated my position, even in this line, which I did not claim as within my original subject. And, to show how widely different is the descent of mankind from those of brutes, I will name a familiar instance within my own observation.

I know three brothers who married three sisters, and a brother of the sisters married a sister of the brothers. They were all healthy, well conditioned, intelligent persons, born and brought up together in the same neighborhood. The four families thus constituted, all had children. Each family of children resembled one another quite as much as children of the same family usually do; and one would suppose that each separate family of children would much resemble the others. But such is not at all the case. Neither family resembles the other in feature, or idiosyncracy of character, more than if they were entire strangers, although the four parents on both sides bore a marked family resemblance each to the other, on their own sides. And more than all this, a couple of these double cousins have intermarried, without progeny, as yet, but which, if it ever appear, I shall look upon with some interest.

Now, such a variety of appearance in the offspring of the brute creation, if of the same breed or variety—and from such only have we a right to expect truth, or homogeneousness in descent—can scarcely be found. It belongs only to the human family, and the reasons for which may be found in what I have already written in previous papers.

In my last paper, giving the pedigrees of various noted horses, and showing many of them to be very closely bred, either in themselves, or their immediate ancestry, I did not analyze their degrees of relationship, as any one curious in that way could readily do so for himself; but these were full brothers and sisters, half-brothers and sisters, sire and foal, and most other degrees of relation that could exist in the way of breeding—enough so to establish my position as to the good effects, or at least the absence of bad effects *under proper circumstances*, of breeding animals closely in-and-in.

I will give still further instances. Those conversant with the domestic history, habits and taste, of the English people, have read of, if not seen, that there are kept by

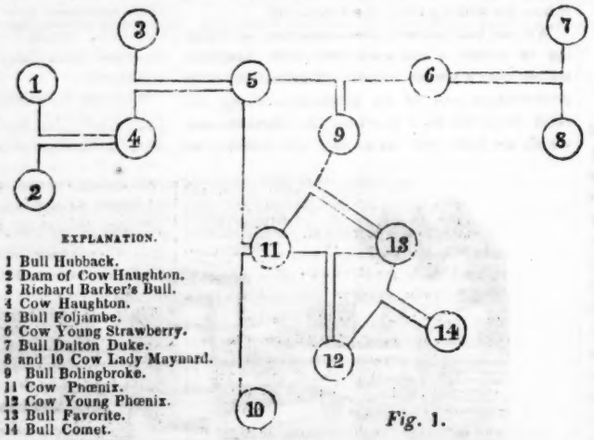
several noblemen and others, at their country places, kennels of hounds, terriers, spaniels, setters, pointers, as well as other domestic fancy animals, to whose breeding particular attention has been paid. Many of these are known as the Duke of so-and-so's breed, or the Earl of that-and-so, or Lord thus-and-so. Buccleugh, a Scottish Duke, has hounds. Earl Derby, whose own blood traces back to the Saxons before the conquest, and his titles to a period soon after, glories in the superiority of a gallant breed of game cocks. Lord Bootley, boasts and glories after his daily dinner over the beauties of his dovecote, in which every bird has its perfect complement of parti-colored feathers in the right place; while Sir Launcelot Harewood, is quite satisfied that he has now bred his long eared rabbits to a degree of perfection in all their furry qualities, hitherto unattained by mortal man! Even that dirtiest profligate, that ever disgraced the British throne, the third Stuart, and second Charles, could not take his morning walk in a London park without a dozen diminutive Spaniel dogs at his heels, which down to this day are known by no other name than "King Charles'." All these varieties of creatures have been brought to their distinctness and uniformity of character and looks, by persistent in-and-in breeding. That is their history for untold generations back.

We know a fine flock of domestic pigeons, descended from two pairs, now living on an island secluded from all other pigeons, where they have lived and flourished for years, bred in-and-in continually, and as perfect in form and spirit as can be. We knew a flock of beautiful China geese on the grounds of a friend, which are descended from a single pair imported from China direct to this country, many years ago, bred in-and-in closely ever since, and not a single cross from any others, now as prolific almost as ducks, and still beautiful and vigorous as ever. To go back to pigeons, it is well known that the female lays but two eggs for a setting, and that these eggs invariably produce a male and female, which usually pair of themselves when at maturity, and produce their young in turn. Who ever knew of an imbecile, or idiotic pigeon, however bred? So, too, with canary-birds, which are bred by thousands among our German population in the cities—not in the number and sexes of their eggs and young, but in their interbreeding. The thing, indeed, is so common with all *small* creatures as to cause no remark, or even excite a question as to the entire propriety of such close breeding.

These instances show that nature breeds in-and-in without *selection*, by the triumph of the strong over the weak. It may be replied that these small or inferior animals are of a ruder organization than the nobler classes of farm stock; that they have less intellect, and are not so easily affected by consanguinity of blood. We can only answer, that all brutes under the dominion of man are destitute alike of those finer faculties only known to humanity, and in that regard are upon a level. Promiscuous, unhesitating, sexual intercourse, when in passion, is their wont, and they can only be prevented from its indulgence by absolute force. Hence, it is their *natural* disposition, and the only mode to govern the character of their offspring, is to properly select and couple them in their connection. The *physical* power and habit prevails over every other in their conception, growth of fœtus, and progress after birth, unless in extraordinary cases of fright, association with strange objects, or accident occurring to the female parent, either at the moment of conception or during pregnancy, and this altogether irrespective of what blood relation she may hold to the sire of her young.

In a former paper I spoke of the in-and-in system of breeding of the Colling brothers with their Short Horn cattle. To illustrate more fully some instances of their close breeding. I find in the 1st Vol. American Short Horn Herd Book, a diagram of the breeding of the bulls Favorite and Comet, the cuts of which I have been enabled to loan from that work, and which I present below.

Thus it is seen that arriving at the Bull Foljambe, No. 5, he is coupled with the Cow Lady Maynard, No. 10, and they produce the Cow Phœnix, No. 11. On the other side Foljambe is coupled with the Cow Young Strawberry, No. 6, and they produce the Bull Bolingbroke, No. 9, a half brother, as well as nephew, to Phœnix, No. 11, both being got by Foljambe, and Bolingbroke a grandson also to Lady Maynard, No. 10 and 8. Then these two last named (Bolingbroke and Phœnix, closer than half-brother and sister) are coupled, and produce the Bull Favorite, No. 13. Then this same bull favorite is coupled with his own dam, and produces the Cow Young Phœnix. No. 12. Again is Favorite, No. 13, connected with his own female progeny, (out of his own dam), this cow, Young Phœnix, No. 12, and their produce is Comet, No. 14, the most magnificent bull in all England, which Ch. Colling sold at his great sale for 1000 Guineas=$5,000!



EXPLANATION.

1 Bull Hubback.
2 Dam of Cow Haughton.
3 Richard Barker's Bull.
4 Cow Haughton.
5 Bull Foljambe.
6 Cow Young Strawberry.
7 Bull Dalton Duke.
8 and 10 Cow Lady Maynard.
9 Bull Bolingbroke.
11 Cow Phœnix.
12 Cow Young Phœnix.
13 Bull Favorite.
14 Bull Comet.

Fig. 1.

It is needless to say that every one of the animals in this genealogy were of the highest repute for blood, and quality. The diagram, No. 2, will show still further and more pertinacious, but equally successful breeding by Robert Colling on his in-and-in system.

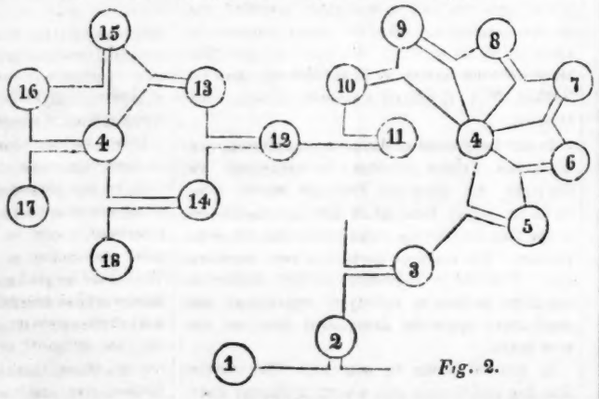


Fig. 2.

EXPLANATION.

1 Bull Hubback.
2 Son of Hubback.
3 Cow of Son of Hubback.
4 Bull Favorite.
5 1st Cow by Favorite.
6 2nd ditto.
7 3d ditto.
8 4th ditto.
9 5th ditto.
10 6th ditto.
11 Cow Clarissa.
12 Bull Wellington, Sire of Clarissa.
13 Bull Comet.
14 Cow Wildair.
15 Cow Young Phœnix.
4 Favorite again, grandsire of Wellington, the Sire of Clarissa. No. 11 Favorite's own 6th grand daughter on the other side.
16 Cow Phœnix.
17 Bull Bolingbroke.
18 Grand-daughter of Hubback.

In this diagram it appears that the bull Favorite, No. 4, (on the right hand) was coupled with the cow No. 3, by son of Hubback, No. 2. (somewhat related to Favorite, through his progenitor, Hubback.) Their (Favorite and cow by son of Hubback) produce was the 1st cow by Favorite, No. 5. Favorite was put to this cow No. 5, (his own daughter) and produced No. 6, (his grand-daughter by his offspring) and so on in continuous succession for six generations, arriving at No. 10. Then this cow, No. 10, is met on the other side with the bull Wellington, No. 12, deeply interbred on the side of both sire and dam in the blood of Favorite, as will be seen in the diagram, and the cow Clarissa is produced—a capital beast in quality, and one of whose daughters, Restless, became afterwards a breeding cow in Sir Charles Knightly's herd, one of the best in England. In all these cases—deeply interbred from the start - a continuous success in the quality of the animals was the result, by men who knew *what kind of animals* to select for their purposes, and having selected, knew how to use them. It may be thought by my readers that the subject is exhausted. If so, this paper will end it. I leave them to judge whether the position which I first assumed, to wit: in-and-in breeding *with the right kind of animals* is *not* prejudicial; but on the contrary, *properly understood and practiced*, improvement will be the result. Further, I do not hesitate so say, that *unskillfully applied*, in-and-in breeding is the *very worst practice* a stock breeder can adopt.

Bedding for Cattle.

The importance of this is conceded for the horse, and most humane owners provide straw or refuse hay to put the nag at his ease when he lies down in his stable. It is quite as important for all the ruminant animals that we have domesticated. Instinct prompts them to seek the dryest, warmest spot in the pasture for their repose, and Nature spreads for them the soft green turf, quite as much for their rest, as for their sustenance. The wise farmer will profit by Nature's hint, and when he stables his cattle for the Winter, will provide dry warm beds.

Bedding favors the accumulation of fat and muscle, by helping to retain the animal heat, and promoting quiet and comfort. It also promotes the secretion of milk in cows, for the same reasons. Any one can satisfy himself on this point, by experimenting with a cow a week in a well bedded stable, and a second week upon the bare ground in the barn yard. Cows in milk are kept much cleaner with a good bed, and this is an item of prime importance, with all who love clean milk. Quite a variety of substances are used for bedding. Straw and hay are the most common, as they are the most convenient, especially to farmers who raise grain largely, or who have a good deal of swamp land, yielding poor hay.

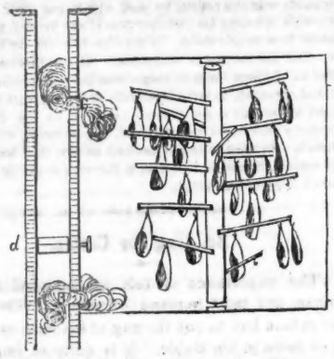
In cities and villages, they are often too costly, and this has led to various substitutes, some of them quite as good as straw, and having this advantage, that they add very much to the manure heap. Dry saw-dust, from saw and shingle mills, and the fine chips and shavings from planing mills, all make good bedding. Spent tan bark, when dried in the sun, also serves the same purpose, and makes a much more valuable manure. Eelgrass is also much used for this purpose, by the sea shore farmers, and answers well. Leaves from the forest, especially those of hard wood trees, make a still better bed, and form one of the best composts for the garden or field.

Dried turf from a salt marsh is, on the whole, the best bedding we have ever used in our stable. It is cut in Summer, in blocks of about a cubic foot each, dried in the sun a few weeks, and then stored under cover for use. It is very light, spongy, and absorbs urine better than any thing we have ever tried. A layer of it under a horse will last about two weeks before it is saturated. It is then thrown into the barn cellar, to undergo fermentation.

One great advantage of this, and of the saw-dust and tan-bark is, that they put the animal heat of the stock to an economic use. It promotes the decomposition of the vegetable matter, and swells the manure heap very rapidly.

Any one, or all of these materials are exceedingly valuable in the stable, and the stock owner should use them as largely as possible, for the purpose of increasing his stock of fertilizers.

Chinch Bug.—The Ogle County (Ill.) Reporter says that a farmer checked the ravages of the Chinch-bug by strewing a breadth or line across his corn field with air-slaked lime.

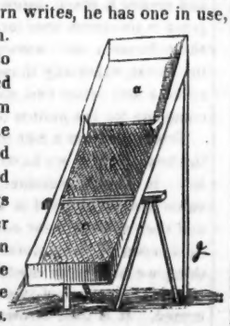


An Attic Smoke Room for Hams.

We present above a section of an original plan for a room, to be constructed in a chamber or attic, where hams may be cured with the smoke from a common chimney, and be left suspended there for keeping. The room may be of any convenient size and hight—5 or 6 feet square would do Two openings, *B* and *C*, are made in the side of the chimney, one near the bottom, and the other near the top. Sheet iron slides, not shown in the engraving, serve to open and shut these apertures. By turning the damper, *d*, and opening the slides, the smoke is turned through *B* from the chimney into the smoke room, and it passes into the chimney again through *C*. The hams, or other meats to be smoked, are hung upon arms and hooks projecting from an upright shaft, which turns on pivots at the bottom and top, so as to change the position of the meat, and smoke it uniformly. To be perfectly secure against fire, the rooms should have brick sides, and a floor of zinc, sheet iron, bricks, or stones. Plastered walls, without base-boards, might be safe; the only danger being from sparks, as no fire is needed inside.

A Corn Cleaner

The accompanying engraving we make from a sketch and description sent us by Geo. A. Sanborn. The implement is simple in construction, and can be easily made by any one. It is not patented. Mr. Sanborn writes, he has one in use, and he likes it much.

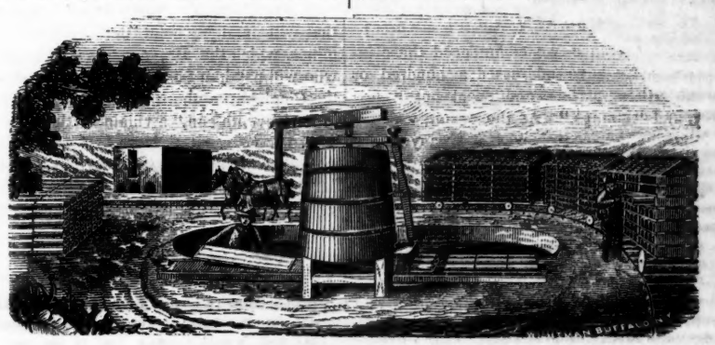


Two side and two end boards are nailed together in the form of a wagon box. The part, *a*, is bottomed with thin boards, and has two small wings nailed in at the lower end, to throw the corn towards the middle of *b*, where a fine sieve lies upon cleats. At *c*, a coarser sieve, taken from a common fanning mill, is laid in. The lower end of the cleaner is supported by the wooden bench, and the upper end by the upright pieces, *g*, *g*. The corn is thrown upon *a*; it slides down over *b*, which is just coarse enough to let the chaff drop through. The next sieve, *c*, lets the corn pass *through* it, into a bag, but retains the cobs. The whole is set at such an angle that the corn and cobs will readily slide down without shaking.——This apparatus may be useful where a fanning mill is not at hand, and also for readily carrying to the crib and elsewhere; but for ordinary use the fanning mill will answer every purpose; and what is more, blow out the fine chaff and dust.

Machine for Making Drain Tiles.

Cultivators have become so generally convinced of the immense advantages of tile drains, that there is springing up all over the country a demand for tiles—a demand which is very inadequately met by the few scattering manufactories located here and there. The expense of tiles, including a high price paid to the manufacturers and especially the large cost of transportation, still stands greatly in the way of their general use. Numerous inquiries are constantly addressed to us in regard to the best kind of machines for making tiles, their cost, etc.

We can best answer these inquiries by bringing to notice a comparatively new machine, which after a recent careful examination of its construction, and of its practical working, we *think* to be the best machine for common use, which we have yet seen—and we believe we have examined all the various machines yet put into operation in this country. The machine referred to, though patented 18 months since, has not been brought prominently enough before the public, owing to the straightened circumstances of the ingenious and indefatigable inventor, and on this account we take the more pleasure in speaking of its merits. We refer to the Tile Machine constructed by F. M. Mattice, now at Buffalo, N. Y. (formerly a resident of Ohio, we believe).



DRAIN-TILE MANUFACTORY.

In the foreground of the accompanying engraving is one of these machines in operation. On the right, the unburned tiles are shown upon racks for drying, from which they are transferred to the kiln for burning, exhibited in the left of the picture. The machine itself is a very ingenious one. It would be impossible to fully explain its operation without a variety of engravings, and much more space for description than we can now spare.

In general terms we may say: The clay is first dug and thrown into a heap, sufficient water being added to give it the proper working consistence. It is then shoveled into the upright drum which holds, say four or five barrels. Inside of this are a series of arms and knives, so to call them, which cut and work the clay sufficiently for molding. At each revolution a portion of the lower part of the clay is pressed into a piston box, standing partly under one edge of the drum. The box then closes, and the piston, or follower, forces the clay through a screen which takes out stones and lumps, and tempers it still more. The clay comes together in a mass on the other side of the screen, and is then forced out through the *dies*, in two or three long tubes of any desired form. These tubes rest upon short boards lying on an endless apron. A frame with fine wires stretched across it at proper distances cuts these tubes into pieces of any desired length, usually about 14 inches. As fast as formed, the boards are taken up by hand and carried to the drying racks. There are a number of ingenious contrivances for opening and shutting the piston box, removing and cleaning the screen, etc., which can only be understood by an examination of the machine.

The whole apparatus is nearly automatic—the rough clay is shoveled in, and the team or other power started; the clay is worked, and comes out in perfect well made tiles, and all without the slightest attention, save to keep the team in motion, and carry away the ready formed tiles to the drying sheds. This is a great improvement upon other machines now in use, which require the clay to be worked in a separate mill, and then screened in another, involving much more time and labor.

Pipe tiles are burned in the same manner as bricks, and this machine being small, and complete in itself, may be put up and at once set to work wherever a clay bed is at hand with fuel for burning, and lumber enough to construct the drying sheds. For particulars as to form and cost of sheds, etc., address the inventor as above. These machines will be furnished complete, set up and started at work, satisfactorily, for from $200 to $350 we believe, depending upon the size, capacity, distance to be transported, amount of gearing, etc. The one we saw in operation, turned out some 300 to 350 two-inch tubular tiles per hour, when driven at the slow walking gait of horses.

It will be more convenient to use the machine in connection with a brick-yard already in operation, for the purpose of having burning kilns, and experienced burners, ready at hand, but as above remarked, it may be set up, and worked at any point convenient to save transporting of tiles. We would be glad to see one in every township where clay is accessible. We expect to put down a lot of tiles soon on our place, 12 miles east of this city, but the most accessible point from which we can obtain them is at Albany, 150 miles up the Hudson river, and to the present high price at the manufactory we must add transportation, as well as carting and handling two or three times, which increases the cost nearly one-half; and yet we are not so badly off as thousands of farmers who would gladly lay down considerable quantities of tile at this time if they were to be had. This fact is a sufficient excuse for the space we have given to the subject, and the high terms in which we have spoken of an implement that we think will meet a great want of the country.

BEES.—A large number of letters on Bees have come in at a late date—too late to be examined, culled, and prepared for this paper, which goes to press earlier than usual. Articles on any topic should generally be on hand by the first of the month preceding publication date, as we then, or before, lay out the work for the next issue.

Advertising Information—Gratis....V.

(*Continued from page* 296.)

[As this paper goes to a large number of new readers, it may be well to explain that the object of these articles is to *inform* the public as to the real character of a class of taking advertisements afloat all over the country, which are so worded as to require a letter, and usually stamps or money enclosed, before one knows whether they are deceptive or not. Our plan is, to have a letter written and mailed at some distant P. O., signed by some friend, and the answer is then forwarded to us, and the result here given. In this way one single letter answers for all *our* readers. We have abundant evidence that in this way, and by guarding people against the traps of humbugs, we have, during the *present year*, saved the community at least $300,000, or more than six times as much, as they have paid for sustaining the *Agriculturist*. Take a single item only. Plans were laid deep and wide for the sale of that "Honey Blade Grass" the country over. A single manufactory was to make 100,000 of the $3 bags. Our exposure nipped the thing almost in the bud, or at least when only 13,000 bags had been taken. This fact, which we have but recently learned, together with other items of similar import, indicate that our article saved the country from 100,000 to 200,000 dollars in one item.]

Safe Rules.—Since we commenced these investigations, we have addressed a hundred or more advertising parties, and spent not a few dollars, and "stamps." As the result, we give the following advice: Never send any money or postage stamps, *nor even your name*, to any advertiser who does not come out fairly and squarely and tell exactly what is the character of his business, what it costs, etc., etc. If you do, you are likely to be swindled in some unexpected way. As a general thing, no one will seek your address even, unless for some scheme to get your money without an equivalent. It is perfectly certain that any one offering a great fortune for a trifling sum, is a humbug. No one would sell a splendid money making chance for a "few stamps," or a few dollars even—he would himself secure the prize if there was one, instead of selling it for a song. As an illustration of this last statement let us take from our loaded desk

[No 15]

This portrait we transfer from a "Circular," sent to a friend, by a Dr. ——, who was driven from New-York and then from Philadelphia by the police, but who now hails from Cincinnati, whence he is scattering his advertisements and circulars broadcast over the country, and by his specious pretences is gathering money from the trusting simple-hearted in untold sums. He publishes pretended letters and statements from distinguished characters and societies, to convince the unwary that he his able to tell unerringly, what tickets to buy in lotteries, in order to secure immense prizes. He offers for a fee of $5 to secure you a prize of $100 to $500; and so on up to a prize of $30,000 for a fee of $120. He however modestly invites you, if at all doubting, to test his ability by sending $5 first, but says, when you get the prize for that, you will regret that on account of doubtfulness "you have ceased the *Fortune* which was offered." (We don't doubt you regret *when* you get your first prize). The above cut is introduced by him, we suppose, to illustrate the joy of the one who invested $120 with this "seventh son of a seventh son," and thereby drew $30,000. The Doctor must have sat for his own portrait—those teeth indicate the *biting* villain himself. It would be supposed that the simplest hearted man alive would ask, why the "Doctor" does not *help himself* to these $30,000 prizes; but we have evidence that multitudes are gulled by his specious pretences—and for such we write. The sick need a physician. We will not dwell upon the Doctor's "Magical Electric Stones" that will infallibly point the purchaser to rich mines, which the Dr. generously gives to those who will pay him $5. We invite the attention of the Cincinnati authorities to this "seventh son of the seventh son," a villain of the 49th power, whose name, reputed place of business in that city, and other items, we shall be happy to furnish. In the meantime, let our readers beware of all circulars, etc, purporting to come from any one named "Roback."

[No. 16.]

EVERY Farmer his own Tea Grower.—Capt. Kayman has arrived from Hong Kong with 200 healthy tea plants, warranted to grow in every State. One slip increases in two years to 5,000 pounds. Price $5, with directions. Immediate applications necessary. Number limited. Address, etc.

Wonderful indeed!—A tea plant that is "warranted to grow in any State" and "one slip will increase to 5000 lbs. in two years." Why, these will be worth two thousand dollars. We must have the Captain's whole stock of 200 plants, and then in "two years" we shall have one million pounds, aye, and much more, for a single "*slip* will yield 5000 lbs.", and we'll cut our "healthy plants" into a hundred "slips" each, and then we shall get a hundred million pounds in two years! Whew! how rich we already feel....But, like the maid of the milk pail, how are our hopes *upset*—*our* chickens, too, are yet in the shell. We promptly wrote the "captain" (per a friend), offering to take his whole lot, or any part of them, and begging to know where we could meet him to *see the plants*, and pay over the cash. (We didn't like to, and *didn't* enclose the $5.) But up to this hour we can't get a word from the captain, nor can we, after diligent search, find his whereabouts. Capt. Kayman, answer our letter right off, or we shall tell the world the truth, to wit: You are a humbug!

[No. 17.]

100 AGENTS WANTED. No humbug. Send red stamp to ——, ——, Me.

Sold again, but not badly. One-third of our "red stamp" paid the postage back on a long circular, telling us of fifty ways to make money, which fifty ways we could have for 33⅓ *more* red stamps, or $1. The secrets you offer, Mr. Main-e(ac), we have all by heart. They have been offered by a hundred other "patentees," and many of them we have already published. *You* can't have our "dollar."

[No. 18.]

25 RECIPES and a BOOK CATALOGUE sent free. Address ——, Brasher Falls, N. Y.

Good. No "stamps" wanted here, and 25 recipes gratis with a "*Book* Catalogue." A friend addressd him, and got the 25 recipes, etc., for us, all printed on a very little sheet. Pshaw! they have mostly been published in this paper, long since. Among them is the "honey recipe" again. Dr. Creager, "Patentee," will take notice. (See October No., page 296.) The "Book catalogue" names some fair books sold everywhere, some indecent, and many worthless ones, all for sale by the advertiser. But all this is apparently only a cover for a circular enclosed, of the most indecent character, too much so, to be described even. The Postmaster of Brasher Falls will please take notice that this advertiser sends out two circulars under one penny stamp.

[No. 19]

"WONDERFUL! WONDERFUL!" Full instructions by which any person can master the art of Ventriloquism in a few hours practice. Sent free to any one for 25c. Address —— ——, Philadelphia.

A friend enclosed the "quarter," and received a printed slip with the "Full instructions." It commences: "The first grand secret of Ventriloquism is speaking *with the mouth closed*." (Such an art would be invaluable for some folks we know of.) A little further on we read: "A little opening must be left at the left corner." "When imitating another person, you must try and force the voice into the belly as much as possible." (Wonder if talking backwards will do this.) Finally, to "throw your voice anywhere, you would only have to think how it would sound, and imitate it as near as possible"!!! Accompanying the little slip was a circular, describing a book called the "Silent Friend," which professed to teach all things impossible, with not a few indecent, and which would be sent for $1. That's all.

[No. 20.]

HO! FOR FISHING! Those fond of fishing will address, with 15 cents, ——, North Strafford, N. H.

"Fishing" is our business now, so we just "dropped a line" to North Strafford, baited with 15 cents, in hopes of good sport. For a long time, nothing came, but patience is the fisherman's virtue. Ah! here come two letters from Strafford at one *haul*, one written the other printed. Mr. ——, *keeps our* 15 *cents, without any equivalent*, and intimates, that the bait isn't heavy enough. He says he has in his possession several arts and secrets by which all kinds of fish can be caught in any water, as fast as they can be picked up. He has five ways of taking them *with* a hook, and the Chinese art for taking them *without* hook, or net, never before published in this country. (!) Send him $5 and he will forward the recipes. Mr. ——, you slipped that 15 cents off our line so nicely, that we are afraid to try the $5 bait. Your Chinese art, however, we will publish. We "hooked" it, not from you, but by a "line" sent out West. Here it is:

CHINESE ART OF CATCHING FISH.—Take *Cocculus Indicus*, pulverize, and mix with *dough*, then scatter it broadcast over the water, as you would sow seed. The fish will seize it with great avidity, and will instantly become so completely intoxicated that they will turn belly up, on the top of the water, by dozens, hundreds, or thousands, as the case may be. All that you now have to do is to have a boat or other convenience to gather them up, and as you gather, put them into a tub of clean water, and presently they will be as lively and healthy as ever. This means of taking fish and the manner of doing it, has heretofore been known to but very few. The value of such knowledge admits of no question. *This manner of taking fish does not injure their flesh in the least.* [Yes it does *poison* them.—Ed.]

(To be continued as needed.)

Agricultural Humbug at Washington.—That stupendous humbug, the so-called "Agricultural Department of the Patent Office," we have had frequent occasion to show up in these columns, and we were preparing to pay our respects to it again on the assembling of Congress. But we are saved that unpleasant labor. The department is closed. The sensible Commissioner of Patents, finding no better way to deal with the incumbent D. J. Browne, has dismissed him, and shut up the shop, refusing to even ask Congress for further appropriations. Let Congress now establish a

new, independent "Department of Agriculture," and put at the head of it some *honest, intelligent* man, and we may then have something that will be not only a vast benefit to the country at large, but a credit to us as an agricultural people. Of the rumored $100,000 defalcation in the "Government Seed Store," we shall have more to say when the truth is known.

Written for the American Agriculturist.—Prize Articles.

Farm Fencing.....VIII.

In addition to the varieties of farm fence which we have described, the last, and as yet doubtful application of the WIRE FENCE, remains to be considered. Were our climate more equable in its temperature, we think there could be little or no question of the entire practicability of wire being extensively used as a cheap and sufficient substitute for boards. The writer has seen it adopted with good effect on some farms, and on others, under like apparent circumstances, it proved a failure. Intense frost contracts, or excessive heat expands the wire in length; consequently there is a difficulty in giving the wires, as they stretch along the several posts, such exact degrees of strain or tension, as will contract with the frost, without breaking, or stretch with the heat without sagging to a degree of preventing its efficiency against unruly cattle.

It is our opinion, however, that a good wire fence can be made to stand; and entertaining such opinion, we proceed to describe the mode of making it according to the best lines of fence that we have seen, and which have thus far proved themselves permanent in their object.

At the end of the fence line, plant a stout, durable, heavy post, at least three feet in the ground, the earth well tamped, so that it shall stand perpendicular—and if there is any doubt about it, brace the post *on the straining side*, so as to render it secure. Then plant a line of common sized fence posts, either split or sawed—no matter which—at intervals of about sixty feet, if the whole line of fence does not extend more than four or five hundred feet. If the line is a very long one, say half a mile or more, let a post like the corner or commencing one be inserted at every five or six hundred feet distance, on which the wires can be effectually *wound* from either way as a permanent fastening for the whole line of wires so stretched. Through the end or commencing post, bore quarter, or half inch holes, beginning at a foot from the bottom, or nearer if it be necessary, and at about a foot, or less, or more, distance apart—depending on the creatures to be fenced against—until it is as high from the ground, as the fence is wanted when finished. Thus there is a line of posts in range, and the first one bored is a guide for all the others.

As to the WIRE and its size. None but wire of the best and toughest quality should be used, and the size may vary from that of a common goose quill down to a rye straw, or about number 9. The smaller size, we think, taken altogether, is as good as the larger, besides being much cheaper, and easier managed. To make the wire perfect in quality, and most durable, let it be *annealed*, or thoroughly heated to near or quite red heat while in the coil, and afterward boiled or scalded in linseed oil. The heating makes it soft and pliable, without breaking at a short bend or twist. The oiling makes it impervious to rust for some years, taking the place of paint.

To prepare the wire for stretching into the fence after annealed and oiled, it should be wound off on to a light reel, say a foot in diameter. This reel can be made of slats nailed on to a couple of heads, made of boards, through the center of which holes can be bored, to admit a round stick on which the reel can revolve, to let off the wire as it is stretched along the line, one or two men, according to its weight, carrying it along. Then, having settled the distance from the ground, at which the first wire shall be drawn, and the distances apart for the other wires, take a stick the hight of the fence, and mark it at such distances, as the wires are to be apart. Then have a hand basket, in which is a hammer, a good strong pair of pliers, and a quantity of small iron staples cut and bent, with the ends sharpened to drive, made of the same size *annealed* and *oiled* wire, as the stretchers are. Thus prepared, run the first end of the wire from the reel through the lower hole in the starting post, turn it round the body of it, and fasten it with your pliers. Proceed on to the next post, the man, or men carrying the reel, which revolves as you pass along, letting off the wire. When arrived at the post, measure off with the stick already described, and mark the places where the wires are to be secured, then laying the lower wire at its place, and drawing it as taut as possible with the hand, drive in a staple over the wire into the post, *nearly home*, so as to keep the wire well in its place. Thus go on for half a dozen posts or so, when, if the wire on the reel is not all used, it may be cut off, and a turn given round the *principal* post, (one of which should be occasionally set, as before observed,) and secured by a twist clinch round the main line of wire *for the present*. Then begin with a new wire, secured as the first, where the other is left off, and follow to the further end post in this line of fence.

In this way let the whole line of the lower wire be stretched. Then do the next in like manner, and so on, until the several strands are completed as high as you wish the fence to be. As it now stands, you have a line of wires secured by staples to every post, and these posts fifty, sixty, or more or less, feet apart, as you may choose. The wires *sag*, of course, and by a little effort almost anything, even a horse or cow, might crawl through or break it. Therefore the fence is not complete. Now, take a lot of stakes, either split or sawed, of *durable* and *hard* wood—pine and hemlock are too soft and brittle—sharpen them at one end, divide them equi-distant between the posts already set, say ten to fifteen feet apart, according to the strength you want the fence to be, and drive them with an ax, sledge, or maul, about a foot into the ground—less than a foot will do, but the deeper the stakes, the stronger they stand. Then measure off the distances for the wires apart, on these stakes, as was done on the posts, drive staples over them as before, and this part of the job is completed.

If the wires, as already laid, are not sufficiently taut, get a tool somewhat like an old fashioned *bed-winch*, and go to one end of the wire where secured at the post, either at the end or along the line of the fence, undo it with the pliers, and apply the winch, until the required amount of tension is obtained, and then secure the end of the wire by turning it around, as before. This can be done with every different strand, bearing in mind, however, that all the wires should have an equal strain, so as to contract and stretch as near as possible with the changes of weather; and also minding the temperature of the atmosphere when the stretching is done, and allowing, *according to your judgment*, for the required amount of contraction and expansion. In this way, the wires will be somewhat loose in extreme hot weather, but kept in place, and at their proper levels by the intermediate stakes.

In addition to the wires, and to secure the foot of the fence better against breaches, some builders recommend that instead of the bottom wire, a line of foot wide boards be nailed on to the posts and stakes. We do not consider this board an improvement, only as defending the enclosure from geese and other small animals, as the wires are quite as strong as the board, and not a quarter so expensive. Others may prefer to bore all the posts, and let the wires pass through these holes; but in this way the reels holding the wire, must be stationary, and the wire by one end drawn through the whole series of posts. We do not think either way particularly preferable, only as matter of convenience in putting the fence up. The holes in the posts will cause rot sooner than the staples, and it is more work to make the holes than to drive the staples. After all the wires are made taut, and the strain equalized, the staples may be driven *quite home*, and thus the wires are effectually secured.

It will be seen that where trees stand, either at the end or along the line of the fence, they may be used, if of a hardy kind, to secure the wires. They are, of course, better than posts, and will save expense. In a very considerable part of the United States, where timber is scarce, and boards dear in price, wire fence can be adopted to advantage.

EXPENSE.

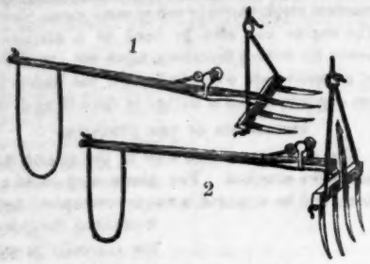
This may be more or less according to the cost of posts, and stakes, and wire. Altogether, the expense *need* not exceed fifty cents a rod, nor *should* it cost a dollar. Each one who proposes to make wire fence, by knowing the value of material at his own place, can determine the exact cost for himself. As to the efficiency of the fence, we have seen herds of cattle on one side at pasture for weeks together, and a field of grain, with other plowed crops, on the opposite side of the fence, and the cattle never broke through. This was the cheapest kind of wire fence, costing not more than half a dollar a rod.

We make the further qualification as to the expediency of adopting the wire fence in *all* climates. Far north, the contraction by cold, and expansion by heat is greater than at the South, where the tension of the wire is less affected by the temperature. The climate will, therefore, somewhat govern the expediency or economy of its adoption for general fencing purposes.

MAMMOTH LEGHORN SQUASH.—Mr. W. S. Carpenter, of this city, has a country residence in Westchester, where he carries on a great number of experiments with new plants and seeds of various kinds—for the love of it rather than for profit. In a recent visit to his farm we saw many things of interest, which we intend to examine further. We were particularly pleased with his growing specimens of a comparatively new *Mammoth Squash*, called the "Leghorn." They looked like large white smooth boulders scattered thickly over the field. We were so well pleased with them in every respect, that we immediately prevailed upon Mr. Carpenter to dispose of all his seed to us, to be distributed free among our subscribers, and we have put it into our seed list, as No. 102. Though we shall have a considerable supply of seed, yet should the demand be large, we shall not be able to send more than about half-a-dozen seeds to each applicant—enough to give a start, however.

Since the above was written, Mr. C., has gathered, from *six* hills, 62 squashes, weighing near 4500 lbs. in the aggregate. The largest specimen weighed 105 lbs. The whole crop averaged about 70 lbs. to each squash.

Courtesy on one side only, never lasts long.



Horse Power Pitchfork.

Unloading hay in a barn by means of horse-power pitchforks or elevators is becoming quite common in some sections of the country, and will be practiced everywhere, as soon as farmers understand the operation, and its advantages. To pitch off a load of hay into a barn bay, or on a high scaffold, which formerly required twenty to forty minutes, and much hard lifting, can now be done in four to seven minutes, and with very little labor. A man working a large farm in Pennsylvania said to us the other day: "I would quite as soon give up my horse-rake as my horse pitch-fork." There are several forms of this implement. The one shown in the accompanying engraving, the invention of C. E. Gladding, of Bradford Co., Pa., is the best we have seen in operation. The fork is suspended by a rope running over a pulley on a rafter, or high beam—down under another pulley on the floor, and out of the door in a horizontal direction, where a horse is attached to it. The fork, set in the manner seen in fig. 1, is thrust into a mass of hay by the man on the load, and the horse started. A large mass of hay is elevated, the fork being steadied by holding on to the left hand portion of the rope in the fork handle. When at the desired hight, the hay is swung into the mow, and then by pulling the other part of the rope which passes along the inside of the fork-handle, the tines are loosened as shown in fig. 2. The fork is then lowered, and readily takes the position of fig. 1 again.

To Break the Force of "Sudden Jerks."

Every one who has used a lever horse power, is aware how frequently cogs, or other parts of the machinery, are broken by the sudden starting of the team. From this cause, we have more than once had threshing brought to a full stop, and a dozen men delayed for a whole day, or more, while a new wheel could be obtained from

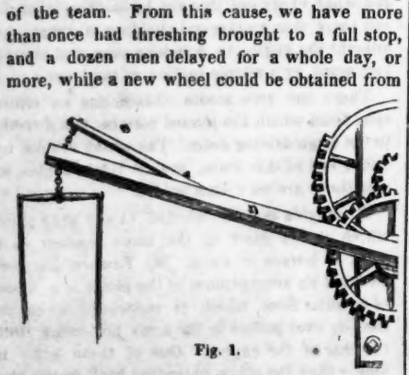


Fig. 1.

the distant manufactory. Fig. 1 gives an outline of a simple arrangement we have seen in a few localities lately, which will effectually overcome the difficulty referred to. To the lever or arm, *a*, a pretty strong piece of tough wood, *s*, is attached in the manner shown in our engraving. A short chain from the whiffle-tree, or the evener ("double-tree"), if two horses be used, passes through a hole in the end of the arm, *a*, and is attached to a hook in the end of the spring, *s*. In pulling with moderate force, this spring stands as seen in fig. 1, and if sufficiently stiff, it will break the force of any sudden "jerk" at starting. So also it yields to the uneven motion of the team, and must necessarily equalize the draft, and lessen the wear upon the neck of the animal. This spring is very easily attached to any horse-power, by simply beveling one end, and fastening it with bolts or clamps. We are not aware that this convenient and valuable appendage is patented.

A similar spring might be readily placed upon the forward axle of a wagon, from which a chain could run to the whiffle-tree, or evener. This would save the sudden jerking always felt by any one riding after a spirited or fractious horse—or even after a slow team, when the whip is applied. If the spring be placed upon the axle, to give free motion, it would only be necessary to have the bolt pass through a link or clevis, instead of through a hole in the whiffle-tree, or evener. For a two-horse wagon, perhaps a better arrangement would be, to place the spring on the tongue, the raised end pointing back. If put on the upper side, the evener would best be placed on the under side, and be fastened to the spring by a chain, running through or over the rear end of the tongue. Or the spring may be put on the under side, and the chain connect it to the evener in the same manner.

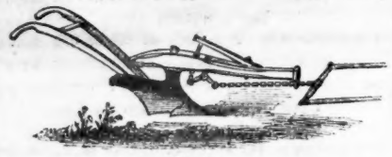


Fig. 2.

We have also seen a similar attachment to a plow, (patented, we believe), to break the sudden force of the team, when the implement strikes a fast stone, or other obstruction. Not having at hand one of the plows thus fitted up, to sketch from, we have made the accompanying illustration (Fig. 2) partly from memory, and partly from imagination, to show how the thing works. In practice we believe the "angle" under the plow-beam is partly set up into the beam, so as to be out of the way. If patented, and the patentee is reasonable in his charges, this attachment must come rapidly into general use, and save much wear and breakage of harness and "plow-points."

Balky Horses.

The prime requisite for the successful management of a balky horse, is perfect *self possession* and patience on the part of the driver. It is quite common to see men fly into a passion upon the first restive symptoms of the horse, and to deal out fierce punishment until compelled to desist from sheer exhaustion, after which, when the driver has become calm, and the horse recovered from his fright, a start is effected and the trouble is over. Young horses before they are completely broken, may stop when in the harness, from a feeling of inability to draw their load, from fatigue, from misunderstanding the will of the driver, or from an excitable disposition, leading them to act upon the impulse of the moment. In all these cases there is necessity for care and coolness in the driver. From the first, and for a long time, the load of a young horse should be such as he can draw with the greatest ease, thus giving him confidence in his own powers. A young horse once "set" will thereafter pull with uncertainty—hence with only half a will; he is then discouraged easily, and balks at trifling obstacles, or if he be of spirited disposition he will spring to it with might and main whenever he feels extra weight behind him, and if not allowed to work in this way will stop at once. It has been noticed that the worst balks usually occur at or near the foot of hills, and this may explain how the horse learns the habit. The driver should anticipate the wish of the horse to rest, by allowing even more frequent intervals than are required. This practice induces the habit of obedience, the horse willingly stops when the word is given, and thus is accustomed to heed the driver's command, which is the first and great requisite in his education. These commands should be given in a way that can readily be understood. A well trained animal shows remarkable intelligence in perceiving his master's wishes, but it is by long familiarity with his ways that this ability is acquired.

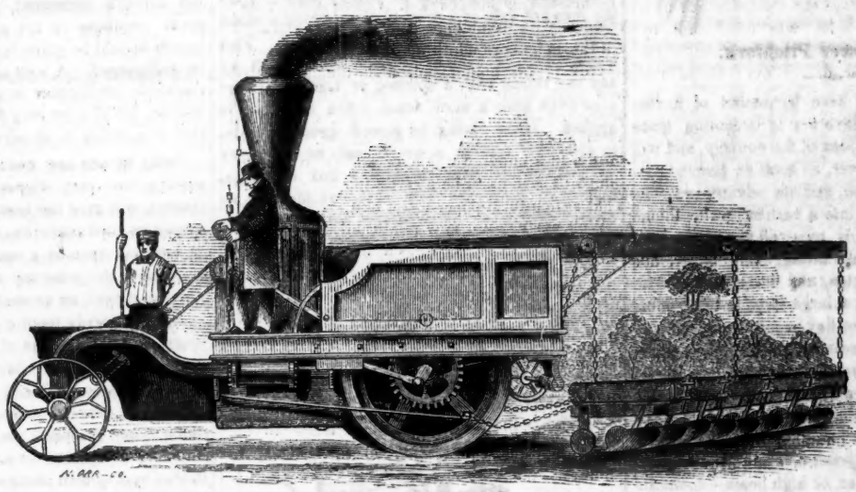
Balky horses are usually "high strung," possessing the very disposition which, if properly treated, will give the best style and action. It is stated on good authority, that such horses may be so wrought upon by a single harsh exclamation, as to raise the pulse ten beats a minute. What wonder if such an animal should prove refractory upon suddenly feeling the lash of an infuriated driver. For this class of horses a whip need seldom if ever be used when breaking them. They yield readily to kindness, and are as quick to obey when properly treated, as they are troublesome when "fooled" with—we use this term for want of a more expressive one. These remarks apply more particularly to the prevention of balking by proper management of colts. When the habit of balking is fixed, impatience of the driver only increases the difficulty. The treatment then requires the highest common sense, the first thing men lose when they fly into a passion. The following directions given by Mr. Rarey, are probably as sound and complete on this subject as anything ever published:

"Almost any team, when first baulked, will start kindly, if you let them stand five or ten minutes, as though there was nothing wrong, and then speak to them with a steady voice, and turn them a little to the right or left, so as to get them both in motion before they feel the pinch of the load. But if you want to start a team that you are not driving yourself, that has been baulked, fooled, and whipped for some time, go to them and hang the lines on their hames, or fasten them to the wagon, so that they will be perfectly loose; make the driver and spectators (if there are any) stand off some distance to one side, so as not to attract the attention of the horses; unloose their check-reins, so that they can get their heads down if they choose; let them stand a few minutes in this condition until you can see that they are a little composed. While they are standing, you should be about their heads, gentling them; it will make them a little more kind, and the spectators will think that you are doing something that they do not understand, and will not learn the secret. When you have them ready to start, stand before them, and, as you seldom have but one baulky horse in a team, get as near in front of him as you can, and, if he is too fast for the other horse, let his nose come against your breast; this will keep him steady, for he will go slow rather than run on you. Turn them gently to the right, without letting them pull on the traces as far as the tongue will let them go; stop them with a kind word, gentle them a little, and then turn them back to the left, by the same process. You will then have them under your control by this time; and as you turn them again to the right, steady them in the collar, and you can take them where you please."

Defile not your mouth with impure words.

The Steam Plow.

[We had planned to present in this number a magnificent engraving of Fawkes' Steam Plow, on a scale so large as to enable all our readers to understand every part of it, and for this purpose, declining an invitation to address an important Agricultural Society, we remained at home to direct the operations of first class artists, whom we had engaged to be on hand at the advertised time of the arrival of the Plow at the American Institute. But it was, unfortunately for us and our readers, delayed at the West, and on the road, until too late to carry out our design in full. As the only resort we were obliged to use sketches and descriptions previously obtained, and we present herewith the best picture we could have engraved in season. As much inferior to what we intended as this is, it is still the best sketch we have seen — Mr. Fawkes says it is superior to any previously made—



FAWKES' AMERICAN LOCOMOTIVE STEAM PLOW.
(*Engraved for the American Agriculturist.*)

From the engraving, and the accompanying description below, and also on the last column of this page, the reader will be able to get a pretty clear understanding of this now most interesting novelty before the public. We have just compared the nearly finished engraving with the implement as it now stands at the Palace Garden, and find our sketch entirely accurate, with the exception, that there should be *two* steering wheels in front on the same axle, instead of *one* as shown in the cut.]

We believe we have now witnessed the fulfillment of the prediction made in this journal four years since ; viz:, that "notwithstanding the great interest abroad in regard to the application of steam power to the plow, we predict that the man who will first successfully attach the locomotive steam engine to the plow, now resides on this side of the Atlantic." When speaking thus we confess we had a suspicion the thing would turn up somewhere in Yankee-dom ; but we are none the less pleased to find it coming from the "Keystone State." That Mr. Fawkes' engine is not yet perfect, none is more ready than himself to admit, but we have no doubt that he has hit upon and applied certain principles, which, when fully carried out, will render his implement a perfect success. In fact, it is already successful, and should no other improvements be made, we believe Fawkes' plow, in the form we have to-day examined it, can be used with advantage in the cultivation of the vast prairies at the West, and in other comparatively level sections of the country.

Passing over other important items in this engine, the *driving wheel* is a point of special interest. This, instead of being like ordinary driving wheels, consists of an immense drum, six feet long, and six feet in diameter, and is so arranged as to bear nearly the entire weight of the engine including the supply of fuel and water. It thus presents a great amount of surface to the ground, and not only prevents its cutting into moist or soft soils, but also gives a great amount of traction or propelling power. To the broad surface of this driving wheel there may also be attached a series of "spuds" or points, which render slipping on the surface next to impossible, and the traction or drawing power of the engine is therefore only limited by the capacity of the boilers and steam-chests, and these may be increased to any desired extent. The capabilities of the implement for propelling or drawing, have been already severely tested. Eight plows of full size, each cutting a furrow fully a foot in width and eight to ten inches in depth have been drawn with ease and rapidity through a hard soil.

OF ITS EASY MANAGEMENT,

we have to-day (Oct. 6th) had abundant evidence. We found it in confined quarters, in a vacant city lot, and surrounded with numerous obstructions. Though we have no practical experience in handling locomotives or steam engines of any kind, Mr. Fawkes freely put his implement under our control, as engineer and helmsman. We found no difficulty in moving it forward or backward, and to the right or left, and we actually drove it several times round in a circle 2½ rods in diameter, and this backward as well as forward. We also ran it into narrow corners and backed it out, and around and by the side of fruit trees where there was but just room for its passage. In short, after ten minutes' experience, we felt quite competent to drive the steam-horse any where, and with as much ease, and quite as much certainty, as we could manage a fractious team before the plow, where we would have live muscles, and more or less *will* to contend with. We merely mention this experiment to indicate the simplicity of its construction and arrangement, and the ease with which it is controlled. For the care of the boilers, and other mechanical parts, an engineer with some instruction and experience would be required with this as with other steam-engines.

It is hardly to be expected that locomotive engines of this form, or of any other form, for that matter, will be constructed so small and so cheaply, as to be available on every farm of moderate size only. Nor is this specially desirable. A good threshing machine, with its complement of teams and hands, will do up the threshing for a whole neighborhood. So one good steam plow, accompanied by a good engineer and attendant, will be competent to plow the larger fields of a dozen ordinary farms. There are, however, tens of thousands of persons, particularly at the West, who have each a domain ample enough, to give almost constant employment to one or more steam plows. The engine can also be used as a stationary power for driving threshers, saws, etc., by means of a band-wheel connected with the independent cog-wheel seen at the end of the driving drum.

DESCRIPTION OF THE ENGRAVING.

The cut gives a side view of the engine with the plows attached. The plows may be of any form, and be arranged in any desired order. Aside from these, the apparatus is similar in some respects to a locomotive or traction engine. The principal weight of the boiler, tender, etc., is nearly balanced upon the axle of the large drum or driving wheel, referred to above, of which the end only is visible. The forward *bowed* end, and a small portion of the weight, rest on a movable axle in front, upon which are two light guide wheels, 3½ feet in diameter, and 15 inches wide at the rim. (Only one of these guide wheels is shown in the cut.) The guide wheels are easily turned to run in any desired direction, by means of an endless chain running from the forward axle to a pulley connected by cogs to the steering wheel in the left hand of the man standing by the boiler. Just back of the man at the wheel, whom we will call the "engineer," is a lever, by raising or depressing which the main driving wheel is thrown out of gear, or its motion reversed at will.

In the right hand of the engineer is a small valve wheel, for letting on or shutting off steam. It will be seen, then, that while he steers with the left hand, with the right he applies or shuts off steam, and also with the same hand applied to the lever, he sends the implement back or forward, or throws it out of geer, at pleasure. We saw Mr. Fawkes run full tilt within a foot of a wall, and when every one thought he must go through, and there was a universal holding of breath, he brought the engine to a sudden stop, and started backward, by a simple motion of the lever.

There are two steam chests, one on either side, from which the jointed pistons run directly to the large driving drum. The piston cranks, on either end of this drum, are at right angles, so that there are no "dead points."

The engine may be hitched to any gang plow, which it will draw in the same manner as a team of horses or oxen. Mr. Fawkes has constructed an arrangement of the plows in a frame of peculiar form, which is suspended by chains passing over pullies in the arms projecting from the rear of the engine. One of these arms is longer than the other, extending back to the rear right end of the gang frame. The suspending chains are wound on a shaft, connected with cogs, easily thrown into or out of gear by the engineer, without changing his position, so that, whenever desired, as in turning at the end of a field, or traveling from place to place, he can raise the plows entirely from the ground. The plows are each supplied with a gauge wheel in front, to regulate the depth. The breaking of a wooden pin saves the plows when they meet fast stones, etc.

An Insane Farmer!

What! insanity in the rural districts, among 'the bone and sinew' of the land! It don't surprise us to hear of speculators in Wall-st., and other fast men and women in the city becoming deranged; but out in the pure air and amid the peaceful scenes of the country, it fairly shocks us to hear of lunatics. And then, worse still, they say this man was driven mad by reading the *Agriculturist*. That brings the charge to our own door in a fearful way. He was upset, not by hard midnight study of mathematics, metaphysics, classics, physic, law, or divinity; not in the vain search for the philosopher's stone, nor by trying to square the circle, or to invent perpetual motion; not by any of these exhausting labors, but simply by reading our quiet pages, at the cool of the day, just after shouting his harvest home.

Not a *real* case of insanity? Just wait, then, till we prove it. Here is the evidence: On the evening aforesaid, while reading this paper, he dropped it on the floor, and fell into a deep study, for half an hour, during which he spoke to no one. Then, suddenly rousing, he brought his clenched fist down upon the table with a blow which made everything rattle, and spoke in a loud voice: "I'll do it, I declare I'll do it, and I'll do it at once." Nobody knew what he meant, and he explained himself to no one. But next morning he went out before breakfast and drove down stakes all along the sides of the highway, and all about his door-yard. During the day, he was seen walking about the premises in front of the house, examing some old and half dead poplars, and was heard to mutter something like this: "You must come down, old gentlemen, you must come down and make room for your betters." And some old stumps and piles of stones and rubbish he saluted in the same way.

Not many days after, he called his son and his man John to dig holes by the road side, and in the yard where he had driven stakes. "What possesses the old man?" they whispered to each other, as they delved away at the unaccustomed work. The holes being dug, he ordered the double team to be hitched up, and all parties drove to the woods. On the outskirts of the forest, the farmer found some fine young elms, maples and ash; he bade the men dig them up carefully, and then haul them home in the wagon. This work he kept up for several days, laboring himself in digging up and setting out, and enjoyed the work exceedingly. By the road side in front of the house, he set rows of white elms, and by the street leading off at right angles to this, he set maples, mingling the hard and soft, and an occasional white ash. As the work proceeded from day to day, he would sit down and look this way and that, and up into the air, in a sort of revery. Perhaps the crack-brained man was thinking that the arching elms would make a weird-looking canopy over his front avenue, and that the gold and crimson and purple hues of the foliage on the side street would look quite fantastic in Autumn. His wife and children, looking out of the windows, occasionally, exclaimed to one another: 'What *is* father doing?" "Birnam-wood has come to Dunsinane," laughingly shouted the oldest daughter, who had read Shakespeare at her boarding-school. Ever since he got his last agricultural paper, his head has been full of something new.

This fit of transplanting was broken in upon for several days, while some of the ordinary field labor called for attention. During this time, he seemed perfectly rational, though his family noticed that on returning from his work at evening, he would walk around among the newly-planted trees and mutter something to them.

But after this work was finished, the disease set in again. He ordered the old poplars to be cut down and grubbed up, and the piles of stones and rubbish by the fence to be cleared away. He then went to a neighboring nursery, and bought several ornamental trees, roses and shrubs, and had them set out in his door-yard. His wife and daughters were delighted, and aided in the work of planting the bushes and vines; though they rejoiced with trembling—it seemed so strange. All the neighbors admitted that the farmer was improving his homestead, and the family took new pride in their dwelling, and felt increasing attachment to farm life. But, then, what did it all mean? He never acted so before. Not one farmer in a hundred was ever known to do such things. There must be a screw loose somewhere. That agricultural paper upset him.

Well, we can not now relate all the circumstances; but matters went on in this way for a long time. Meanwhile, the farmer repaired his house, and built a new front fence, and had them both painted. In short, the whole premises, rear and front, put on an altered aspect. Most of his neighbors said he was crazy. But he replied, smiling, that he saw tokens of insanity in the neighborhood; and he *had been* deranged heretofore, he confessed; but now had come to his senses, and hoped to remain so the balance of his days.

How to Fatten Poultry.

This is a matter universally practiced—after a fashion—and yet but imperfectly understood by a great many people who fatten poultry both for the market and their own family consumption. The different varieties of poultry do not require fattening alike. We will give our plans and experience in each.

The Turkey.—Being a rambling, and insect feeding bird, the young ones should run at large when old enough to do so with safety, until the frost has killed off the insects of the season, such as grasshoppers, beetles and grubs. If acorns, beech nuts, and chestnuts, abound on or near your premises, they may still range on them until two or three weeks before they are required for market. Then they should be taken in, and confined in a roomy pen, *clean, dry, comfortable*, and *well ventilated*, and darkened during the day, so as to make a *twilight*—just enough for them to see to eat their food, yet prevent them from gobbling, strutting, and fighting—for turkeys are apt to quarrel vehemently at times, when they have nothing else to do. Their proper food then is, any kind of grain ground into meal and thoroughly cooked, or if fed whole also boiled until it becomes soft and will easily mash. With either the cooked meal or whole grain also cooked, should be mixed, say one fourth in quantity, boiled potatoes, carrots, or beets—carrots and potatoes are best. These may be put into a common swill barrel, and if you have skimmed milk, or buttermilk instead of water to mix with them, so as to reduce the whole mass to the consistency of a thin *mash*, so much the better, as milk is very palatable and fattening. If this mixture slightly ferments, all the better, provided it does not sour. Have some light troughs made of common six inch wide boards nailed together V fashion, setting in standards made of bits of board 8 or 10 inches wide, and 1½ or 2 feet long, placed edgewise on the ground, with V's cut in them to receive the troughs—all well nailed together. Have also a trough of water, or milk if you have it to spare, near by; also a box of small gravel at hand from which they can help themselves—as turkeys like gravel in their crops, let their food be what it may. A box of broken charcoal—broken into bits the size of acorns, or corn, or thereabouts—will be profitable to add to these, charcoal being healthy and palatable to them. You will be surprised to see the thrift of your birds thus treated, and they will fatten in half the time, and at half the expense as when fed on *whole* raw grain, and running at large. There is a choice in grains—Indian corn, barley, shrunken wheat (good wheat is too expensive), rye and buckwheat—and if all of these are mixed in about equal proportions, with a few oats, are the best. Oats are *chaffy*, and there is little fattening quality in them, especially when fed *whole* and *dry*. No salt, of course, is needed. It will hurt poultry, while it will benefit pigs, sheep and cattle.

In killing turkeys, if all are not wanted at once, select the fattest, as they will not fatten equally, and feed the leaner ones a few days longer, or until they are ready for slaughter. The flesh will thus be found fat, delicate, and delicious in flavor, and much superior to that fed on raw grain, and running at large. The reason for not feeding whole grain is, that it must be *cooked* for mastication in the crop—a labor taxing the physical capacity of the bird heavily, and expending much of its nutriment in the operation. Sixpence worth of fuel for cooking will save half a dollar's waste of flesh in the bird itself, while the time and manual labor consumed in the process is next to nothing in a well ordered household. A common iron boiler, which every farmer's family ought to have, will answer all purposes.

Chickens.—Serve these exactly according to the above directions, only that they require less room; but that room must be equally well ventilated and perches must be also made for them to roost upon. There should be just light enough for a cock to crow by in the morning, and nothing more, as excessive crowing is as fatal to a young cock's fattening as is a turkey's gobbling and strutting. A change of food by an occasional scattering of whole dry grains of some sort may be given to chickens, and also turkeys, but they will after a little time prefer the *mash*, as above described, and to much greater advantage. We may also add that with both chickens and turkeys an occasional, say daily, ration of cabbage leaves, or turnip tops may be given them. They like these as a change or salad. They are also palatable, and although there is little fattening quality in them, they promote digestion, and do them good, though not absolutely necessary.

Geese.—Confine and feed them as with turkeys and chickens, but give them cabbage leaves, or turnip tops daily, and *plenty of clean water* in a large trough, *well washed out every day*. They need no *roosting* poles, of course.

Ducks.—Treat them like the geese, exactly, with the daily addition of a small quantity of flesh either raw or cooked, if convenient and cheap. Tallow chandler's scraps are good, well chopped up, and cheaper than any other flesh, unless butcher's offal can be obtained. Ducks are great flesh eaters, when they can get it. Fish are bad, as they give the flesh a fishy taste.

Without ventilation and cleanliness so *important in fattening, no perfectly good poultry flesh* can be obtained. We know it is quite common with many people—particularly country tavern keepers—to cram their chickens and other poultry into narrow and close boxes, or coops, throw whole grain in any quantity upon the floor, with a saucer or little basin of water once a day, and *think* they will fatten well on that. But they are won-

derfully mistaken. The air they breathe is fœtid with the stench of the fowls; the food fairly smells before they eat it, and the whole flesh is tainted with the foul food, foul air, and foul water. We have sat down to a table with such poultry cooked upon it, and the smell was as bad as that of the coop they inhabited before slaughter, and this too, was in the finest corn and poultry regions in the world, where the best, and very perfection of dressed and cooked poultry should abound.

We state the above methods as the *best* way of fattening poultry. Poultry may be fattened, we admit, and very well too, by letting them run at large, and giving them plenty of whole grains, but not half so cheaply, or readily, as by our process; and when we consider the enormous quantities of poultry raised in the United States, both for market and home family consumption, and the great quantities of food expended in the fattening process, the increased aggregate expense of the common loose way of doing it over ours, is *millions* of dollars annually.

The killing and preparing poultry for market is also an important item of saving and profit, in which our last volume has given ample directions, and we may possibly refer to them in our next number.

Blinks from a Lantern.....XIII.

BY DIOGENES REDIVIVUS.

A GRAND HEN SPECULATION

Since that grand practical joke of classic days, the presenting of a plucked rooster, as a happy illustration of the philosopher's definition of a man, viz. "a featherless biped," there has been no such hen speculation as Higgins has just brought to a successful issue. Your readers will recollect this gentleman farmer, as the sagacious individual who imported "land pike" from Great Britain, with extra bristles, as a rare breed of swine, and fed ruta-bagas at the rate of three bushels a day each, to bullocks, to test their value as an article of food, giving them nothing else.

Last Fall, a new idea struck Higgins, and as luck would have it, it was just at the close of a successful shipment of cotton, bringing him in a couple of thousands in clean cash, that he had no immediate use for. He had the means of immediate realization, and Higgins went out to his country seat, happy as a hen over a new laid egg. He had seen in one of his agricultural papers—for he takes a half dozen, and reads them—a splendid account of "profits on poultry," based upon the success of a small farmer's wife, out in Rhode Island. She kept twenty hens according to the statement, raised a hundred chickens, and sold two hundred dozen eggs, clearing fifty dollars above expenses by the operation. The hens were attended to at intervals of time, when Mrs. Smith had nothing else to do, so that she could look upon her roll of fifty dollars as so much clear gain.

Higgins was an excellent accountant, and he immediately made a calculation of raising poultry upon a large scale. If with twenty hens, worth not to exceed ten dollars, fifty dollars could be made, then two hundred and fifty dollars could be made with a hundred hens—and twenty-five hundred dollars with a thousand hens. The stock would cost not to exceed five-hundred dollars, and the necessary buildings and fences, not over fifteen hundred more. Making a large allowance for disasters, which he could not foresee, he could hardly fail to clear two thousand dollars by the operation every year. This was a better business than any shipping he was ever engaged in, and it would have this advantage, if successful, that he could live at home with his family, instead of being off in the city half of the time or more.

To make the thing sure, so that there could be no mistake about it, he put it upon paper, thus:

1000 Stock fowls	$500
Rent and interest on buildings worth $1500	150
Feed of fowls for a year, say	750.
Wages of a woman to attend them	100.
	$1500.

On the balance sheet he might safely calculate at the end of the year on

1000 fowls	$ 500.
1000 chickens worth	500.
100,000 eggs at one cent and-a-half each	1500.
Manure	100
Total value of sales and stock on hand	$2600.
Deduct expenses, as above	1500.
Profit	$1100.

This was figuring very low, and only allowing less than half the profit realized by the Rhode-Island woman. He really expected to do much better, for he would have his hen palace so warmly built, that the hens would lay all through Winter, when he could realize from thirty to forty cents a dozen for them. He expected, too, to raise two thousand chickens instead of one, and meant, if possible, to make them shell out over a hundred thousand eggs. He had known hens to lay two hundred eggs a year. Higgins was so well pleased with this speculation upon paper, that he determined to carry it out at once. He selected the southern slope of a hill, covering about an acre, and inclosed it with a high picket fence, so that no intruders should rob him of his expected treasures. In the middle he erected his hen palace, a two story building, with an underground apartment, well lighted upon the south, for Winter accommodation. It was furnished with any quantity of nests, lined with clean straw, and with capacious boxes holding bushels of eggs. The peak of the roof was mounted with a tower, full of pigeon holes and boxes. On top of the tower a huge gilt cock was perched, a very ornamental and useful bird; for at the hour of twelve, noon, he regularly clapped his wooden wings, calling all hands to dinner. This device greatly astonished the natives, and whatever might be thought of Higgins and his speculation by his neighbors, this gilt rooster was a revered institution. A town clock, in the shape of a bird, was a novelty even in this part of Yankee land.

Higgins had heard that there was danger of crowding hens into too narrow quarters, and to prevent this calamity, he ran out two cheap wings from the main building, two hundred feet long each, and divided them up into ten apartments each, so that he could separate them, in case disease should make its appearance, among the fowls—a calamity that he did not at all anticipate.

The two thousand dollars were at length expended, the hen homestead completed, and stocked with a thousand fowls. Higgins was not particularly select in his stock, a hen being a hen with him, whether Dorking, Shanghai, Chittagong, Black Spanish, Jersey Blue, Creole, or Leghorn, or a mixture of all these with the Dunghill bird of the natives. He had few thorough breds, except a lot of Game fowls, which he introduced on the second week of the experiment. The Game rooster treated the rest of the cocks as game, and killed four of them the first day he was in the yard, before Higgins had time to interfere. This disaster, however, was soon remedied and the fowls did remarkably well, until they had consumed all the grass in the yard, and laid out the litters that had been conceived in their old homes, where they had plenty of room. Higgins was jubilant for a couple of months, and eggs were sent off by the barrel, to the New-York market, during the months of October and November, last year. As the Winter set in, and the fowls begin to feel the effects of their confinement, the laying began to grow "small by degrees and beautifully less," until a dozen a day was the utmost laying capacity of the whole establishment. A cold snap came on in January, and all the egg fountains were sealed up, as tight as the water in the fish pond. "Nary egg" was the stated morning report of Bridget, for three weeks. The roosters crowed lustily, and the hens clucked and cackled, as if they were getting ready to do a big business, but they did not shell out.

As the Spring opened, the egg fountains were again opened, but in diminishing numbers. The hens indeed laid, some of them eggs, and other some laid low. Many of them were minus toes, badly frost bitten, some were lame, and a great many were diseased with the staggers, and fluttered about as if they were badly corned. The result of the speculation comes out in the following conversation, which occurred as I alighted from my wagon at Higgins' door, lantern in hand.

"I thought, Diogenes, that you gentlemen of the agricultural press, represented poultry raising as a highly pleasing and profitable business; that no stock on the farm began to pay so well."

"That is true, if you know how to take care of them, and do not get so many on hand, as to have them interfere with one another."

"Well, I tried it last Fall, got all the fixings ready, at a cost of two thousand dollars, had plenty of eggs for two months, and then the fowls begun to droop, and I have had more or less of them sick ever since. One hundred and fifty died in the course of the Winter, and they have been dying ever since."

"Why didn't you sell them, Higgins?"

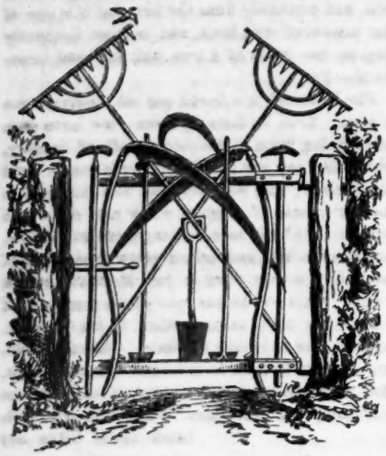
"Nobody would buy, because they were afraid of diseased fowls, and I dare not eat them myself, for the same reason. I am now in a pretty fix, can't sell, can't give away, with as pretty a hospital on hand as any doctor would like to attend. Guess I will lose five hundred dollars by the experiment, clean cash; glad to get off so."

"Boarding is excellent business, Higgins, but you should not put a hundred people into rooms meant for ten, some of them might leave."

"Just so, I see, half of mine have left already."

Bees and Tin Pans Again.

I. S. Wise, of Norfolk Co., Va., writes to the *Agriculturist*: If a young swarm seem inclined to leave the old homestead, get up the best possible imitation of a *coming storm*. The instincts of bees prompt them to settle at once in a cluster (if on the wing) for protection. This can be done by firing a gun, beating a drum or tin pan and throwing water. An absconding swarm may generally be stopped in this way, but I have noticed that such runaways seldom do well, so I now just let them go. Bees (unlike the lords of creation) will not leave their home without cause. Seek rather to find out and remove the cause, than to detain them by trickery.



For the American Agriculturist.

Farm Gates.

Few things give more character to the general appearance of a farm, than a handsome gate at the entrance. "A man is known by the company he keeps" is true in reference to his gates, fences, and outbuildings. If these are in good form and repair, there is evidence of taste and thrift, and a favorable opinion is formed of the proprietor. Said a valued friend, "Show me good fences, gates, outbuildings, with fields free from brush, briars, and weeds, and I will show a good farmer."

A plain, well-made gate, in keeping with its surroundings, is usually the most pleasing, but there is generally room for at least one gate, in the construction of which there may be taste and skill displayed. No stereotyped form would be desirable. Merely as a specimen of what may be done, and as suggestive of other forms, we present herewith a sketch of a gate emblematical of the farmer's profession.—It is not a fancy sketch merely, for the original, from which this is drawn, stands at one of the entrances to "Wodenethe," the picturesque and unique residence of H. W. Sargent, opposite to Newburgh, on the Hudson river.—It is constructed of wood, and every part of it, even to the latch, is the representation of some implement used in agriculture. These are weapons with which the virgin soil can be made to yield up its golden treasures, and fill the granaries and barns, and the home with luxuries from its rich store-house. The spade, mattock, and hoe, have been praised in song.

"It was not the sword that won our best battle,
Created our commerce, extended our trade,
Gave food to our wives, our children, our cattle;
But the queen of all weapons—the spade, boys, the spade."

And thus we might sing of all the various implements, which the cultivator of the soil should feel are his weapons, and have an honest pride in using them. The above figure can be easily imitated, and the implements of the cultivator be made of the various curiously formed branches of trees that abound in our forests. We hope ere long to see more of our farmers with these gateways, thus fashioned in tasteful, rural style. When we see homes ornamented and beautified, we have the best evidence that such a home is permanent, and that happiness is found within. 'Tis then the cultivator feels that there's a richer reward than *money* can give for labor, for he has found the aim of life, happiness—and he beholds

"Yellow sheaves from rich Ceres the cottage had crowned,
Green rushes were strewed on the floor;
The casement's sweet woodbine crept wantonly round,
And decked the sod seats at the door."

Gates should always be substituted for bars at every entrance much used. Test this by figures: To let down and put up bars requires at least two minutes more time, than to open and shut a gate. Allowing the gate to be passed twice a day for a year, or once a day for two years, and there is a loss of more than two whole days to the farmer and his team, and men with him. This would certainly more than pay for a gate. Another has estimated the ordinary loss of time by a man and team equivalent to 6½ days a year, which would pay a large interest on the cost of the best gate.

Self-opening and self-shutting Gates have excited not a little interest of late, and at least a dozen forms have been patented. It is very convenient to be able to drive up to a gate, which will open at your approach, and close after you. Some of these are operated by a kind of crank which the wheel passes over before and after going through. Others are opened and shut by weights, set in motion by a string which hangs so as to be pulled by a person in a carriage or on horseback. [We have seen at this year's Agricultural Exhibitions at least three forms, which are simple, cheap, and perfectly practicable. Illustrations and descriptions of one or more of these will appear in the *Agriculturist* shortly.—Ed.]

Springside. C. N. Bement.

Simple mode of Suspending Slaughtered Animals.

There are a great number of little conveniences in use here and there through the country, but not generally known. We are always on the watch for such items, and have published many of them, but we greatly desire our readers to assist in this work of collecting and scattering more widely a knowledge of how the simplest operations are performed. Our artists are always ready to *develop* the least hint given. Please let us have a hundred such for the coming volume. A rough sketch, or description even, is usually all that is necessary. Here is an example. A subscriber, (James Darlington,) says he found in common use in Saratoga County, N. Y., a method of hanging up a beef carcass when slaughtered, in the absence of a tackle or other convenient apparatus, which he rightly thinks is not generally known. From his notes sent to the *Agriculturist* we make the following engravings and description:

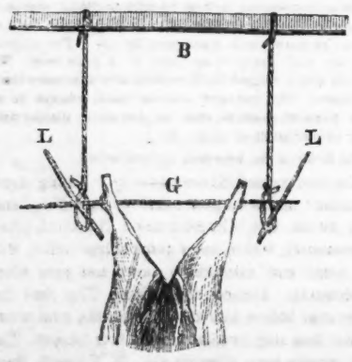


Fig. 1.

In fig. 1, B is a beam or joist in the barn or other out-house. From this two ropes are let down, having a short loop or noose in the lower ends. The loops are brought round the gambrel G, and two small levers, L, L, thrust in as shown in the cut. It will be seen that simply turning these round will wind the ropes around the gambrel G, and shorten the suspending cords with great power. With barrels, or other supports to stand upon, these ropes can be wound up to the beam. The amount of force required will of course depend upon the size of the gambrel G, and the length of the levers L.

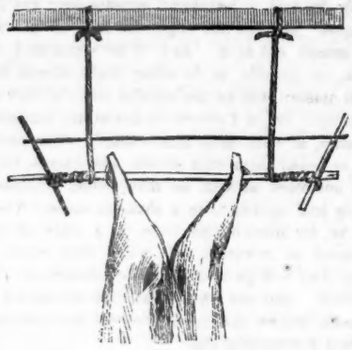


Fig. 2.

In fig. 2 the carcass is shown drawn up by winding the rope, and is held at the desired hight by throwing a rod across *behind* the ropes and *before* the levers. The power, it will be seen, is very great, as the short arm of the lever is only half the diameter of the gambrel, and the long arm two, three, or four feet. A man, with a boy to handle the lever at the other end, may readily raise up the largest animal. We are obliged to Mr. Darlington for this useful hint, and again request our readers in all parts of the country, to send us as many such suggestions as they can.

Carrying Power by Compressed Air—A Novel Proposition.

We have been much interested in a recent application by Messrs. Debain, Botton & Zellier, to the authorities of Paris, for permission to lay down iron pipes to introduce compressed cold air. They propose to construct *outside of the city* an immense engine to compress air into pipes. These pipes are to lead to all parts of the city, like gas and water-pipes. Wherever power is wanted for driving machinery it will only be necessary to tap the underground pipe and let the compressed air escape through an engine, just as condensed steam is used. By means of a simple stop-cock, this air may be let out in small quantities to blow the fire in a blacksmith's furnace, or in a stove or grate. This plan appears feasible, and if practicable, will do away with a multitude of furnaces, and the annoyance of smoke, and the disasters resulting from the explosions of scalding steam. We may soon be printing the *Agriculturist* by air-power, generated up at Harlem, or over in New-Jersey, or out on Long Island, instead of the huge boilers that now stand in close proximity to the press that prints these letters upon this page.—We shall see.

That "Mule Race."—Our readers will not soon forget that picture of a mule race, we gave in last year's *Agriculturist*, and the proposed improvement upon modern agricultural races at "Fairs;" viz. that the competitors should each ride another man's beast, and the prize should be given to the last in. Of course, each man would push ahead as fast as possible, so as to have his own beast, riden by another, *come in last*. We see by various exchanges and letters, that the hint has been pretty widely acted upon this year. About the best affair of the kind occurred at Wheeling, Va., where one little brown mule wouldn't go at all for coaxing, or whip, or kicks and, of course, received the prize of $25.

Kindness vs Whip and Spur.

The adage says: "A merciful man is merciful to his beast." And is not the wise man so, likewise, from notions of *economy?* If I kick, beat or otherwise wrong my horse, or cow, or ox, in the stable, he will, of necessity, become sour and ill-natured. He will not enjoy his food, or get all the benefit out of it. And if he kicks back, or bites, or crowds, or in other ways injures his cruel master, will he not become less valuable as property? So, if I overwork any of my domestic animals, or whip them unnecessarily while working, or assail them with shouts and curses, they will not work as well as they would, if treated kindly and spoken to in a pleasant voice. They will be, for much of the time, in a state of excitement or irritation, and when their work is done, they will go to their stables chafed and exhausted. Any one who has studied the nature of animals, knows that in the respect now noticed, there is a wonderful similarity between them and man. What they do cheerfully they do well and easily, what they do by compulsion they do poorly and with difficulty.

Any excess of loading which a horse or ox is compelled to draw by fear of the lash, is usually a waste and injury to him. Any excess of speed in riding or driving, got by spur or whip, beyond what the animal can easily accomplish, wears upon his strength and his permanent health. If a person must needs draw very heavy loads, let him buy horses or oxen that can draw them without being forced to it by fear of brutal whipping. If he wants to drive a fast horse, let him buy a fast horse, and not compel a slow one to make a speed which he can not do without being overtaxed and injured. There is much to be learned yet, in our treatment of domestic animals. Mercy to them, no less than to our fellow-men, is twice blessed, blessing him that gives and him that receives it.

Cruelty of the Check-rein.

There are some apologies, we know, for the use of this contrivance. It may help, at times, in the management of a young unbroken colt. In the case of carriage horses, too, it improves their appearance; and when they are to be driven at only a moderate pace, it may perhaps do no harm. It is held, also, that horses which are not sure-footed are less apt to stumble, if checked up, and if they stumble, are less liable to fall. But at best, it seems to be an unnatural and cruel piece of apparatus, especially for team-horses. In the endeavor to haul his load, the horse naturally throws his head forward and downward, so as to get a sort of leverage; or, as one expresses it, he tries to "throw his weight into what he has got to do." What, then, if his head is girded up into the air? He works at very great disadvantage.

When a man has hard work to do, he naturally rids himself of all unnecessary ligatures, clothing, and weights. He does the same, if he is going to run, walk a long distance, fight, or recreate in any way. He seeks to get free play of muscle and free respiration. Now, why should he treat his faithful horse differently, unless he wishes wantonly to oppress or injure him? The *N. E. Farmer* is hardly too severe in saying that "any person whose attention has been called to the subject, and who still persists in the use of the tight check-rein, ought to have his own head placed in a similar position for a considerable time. If I were the Grand Sultan, every man who tormented his horse with a check-rein, should hold his arm at right angles with his body for an hour at a time, once in twenty-four hours, as long as he continued the check-rein. For working horses, the use of this pernicious strap is especially cruel. The horse, in endeavoring to put forth his strength, needs the free natural use of his head and neck." And any thing which cramps and restrains him is both cruel to the animal, and makes him less serviceable to his owner.

White-breasted Nuthatch (*Sitta Carolinensis.*)

[In the letter containing the notes below, came a beautifully prepared specimen, made by skinning the bird, and pasting one side, or half of the skin, neatly upon a card. The feathers were all in place, and even the bill, and skin of the feet. At a little distance it had all the appearance of the live bird. A few pencil marks upon the card filled out the representation of the branches, etc. In the accompanying picture we give an exact sketch of the specimen, except the color, which could not, of course, be shown with black printing ink. The original itself we shall preserve enclosed in a glass case. We shall be much obliged for directions how to prepare these specimens. Our younger readers could engage in no more pleasant exercise, than in preparing similar ones from various kinds of birds.—Ed.]

To the Editor of the American Agriculturist:

The bird named Sap-sucker by "Young Agriculturist" in the August number, page 251, I suspect to be the White-breasted Nuthatch (*Sitta carolinensis*), which has a general lead color, with the head and neck black above, and pure white underneath. Length 5½ inches. The foot has three toes before and two behind—the true woodpecker has only two before and two behind. This bird resides here (Oneida Co., N. Y.) both Summer and Winter, and probably also in all the sugar maple and heavy timbered districts of the United States. [We have seen them in large numbers in Maine, Massachusetts, Connecticut, Western New-York, Ohio and Michigan. Their general form is shown in the picture which is the exact size of the full grown bird. From the mode of preparing the specimen, the eye and toes are not perfect, and the engraver has not given these accurately. By remembering that the general color is *lead*, the reader will readily recognize this bird, and especially from the fact that it is one of the tamest of wild birds, and is most frequently seen on the trunk of a tree with its head downward.—Ed.]

The Nuthatch is a friend and old acquaintance of ours. True, he does *tap* trees; we have seen him tapping them in the cold month of January, when the "sap and mucilage" were frozen hard as adamant; and we have seen him tap them in the hot month of August, when the sap would not run. We have seen him tap hemlock, spruce, beach, birch, ash, and indeed every thing else that came in his way, from a rail fence to a rotten stump. This will amuse your young readers, and well it may, for if sugar-making be his business, instinct here is greatly at fault. Closet naturalists say that he lives on nuts, and hence his name. But, whatever may be the habits of the European Nuthatch, our American White-breasted Nuthatch never takes any other food than insects and their larva. It may occasionally wash down its food from the sap spouts. If any of our young friends want an introduction to this beautiful young climber, we will give them the pass word and sign; let them go to the sunny side of the wood or orchard, if they are clean and tidy, and have no smell of gunpowder about them, and he will walk down the body of the tree, head foremost, and meet them with a thousand welcomes. (This is a Blondinian feat, which no Woodpecker ever dare attempt.) Your boys and girls may call him "Nuthatch," and give a reason for so doing. Though his name is a libel on his habits, we must be content; his christening was orthodox, performed with due pomp and solemnity by our savans of the R. N. H. S. (Royal Natural History Society.) John Marsden.

Oneida Co., N. Y.

Tim Bunker on Dress—in Reply to his Neighbors.

Mr. Editor.—I was considerably astonished to see the letter from Tucker and Jones in your last paper. I did not suppose that I had said any thing to break the peace, or to stir up my neighbors, and even that letter don't fairly convince me. You see it is a great country, where it takes two folks to write a letter—and such a letter! Any body that knows those two men, knows that they did not write that letter. It is not in them, and what is not in a man, can't come out of him any way. I took the paper right to Tucker, as soon as it come, and says I to him, says I,

"Tucker, do you know who wrote that letter."

"No I don't Square," says he, "blam'd if I do."

And neighbor Jones said the same thing. If they told a whopper, it probably is not the first one they have told, for though I say it, that should not, their reputation don't stand any the highest for speaking the truth.

I suspect they either got somebody to write the letter for them, or some envious person who wants to get hold of my piece of reclaimed marsh,

wrote it in their name, meaning to run it down, so as to get it as cheap as possible. That is about the drift of the letter, as far as I can see any in it. But I may as well say, first as last, that that piece of land is not in the market. Land that will cut three tun of hay to the acre, or pasture a cow through the whole season, is about good enough to keep. The marsh has turned the heads of some people, and I have had a lot of folks from abroad to see it, and to learn how the trick was done. A fellow called the other day, from way down beyond Boston. He had a project in his head, to reclaim three thousand acres, and make a mint of money out of it. It can be done just as easy as to flip a cent, if he has the money to do it with.

That letter tried to make it out that I had spent a great deal of money on my marsh. This shows how little the writer knows about it. I have got more than muck enough out of the ditches, to pay for all the improvements and top dressings applied to it; so that I am a good deal in debt to that land to day. The principal part of the expense of such an improvement is in the embankment, and that was all made in this case.

As to this marsh ever going back again, of course it will, if it is not taken care of. Any fool can see that if the tide gate is not kept in order, the sea water will come in, and the salt grasses will grow again. But any fool in Hookertown, will tell you that Tim Bunker knows enough to keep a tide gate in order, and to shut out "crabs" and "eel grass."

The letter tries to make a handle out of my *dress*, and on this subject I guess I am posted about as well as some of my neighbors. I believe in people's dressing according to their characters, and their business. If there is any thing better than rubber boots for a ditch half full of water, I should like to see it. I have not got above my business of farming yet, and don't expect to very soon. Some folks, I suppose, like Tucker and Jones, if they should be made a Justice, or elected to any high office, would not wear any thing but calf skin, for the rest of their lives And thereby I think they would show that the calf was a little more than skin deep.

You see, Mr. Editor, this matter of dress is of more importance than most people think. It makes or ruins a multitude of people, and has a great deal to do with these crashes that you have in the city, every few years. And to begin with, as Mr. Spooner would say, there is a great deal in dressing folks up with the right kind of names, when they start in life. I don't think your correspondents were as lucky in their names as they might have been. George Washington Tucker, and Benjamin Franklin Jones, sound considerable grand, and fixed up, as if a man would have to stoop some when he come into the room where such people lived. But I guess if you knew the folks that wear them, as well as I do, you would not think there was much call for manners. You see, Tucker's father was never worth a red cent in the world, above the clothes he had upon his back, and his mother had more pretensions than any woman of her size I ever knew. He was a tailor by trade, and spent all his earnings upon broadcloth and silk, for himself and wife. I remember when parasols first came round, Tucker got one for his wife, and she was so anxious to show it, that she carried it to meeting with her, and hoisted it in meeting time, just as Mr. Spooner begun his sermon, as much as to say "Tucker's wife is some pumkins arter all." The way the minister looked at her was a caution to all peacocks, dogs, and other vermin. Deacon Smith had to come over and tell her to take down that windmill, for he hadn't seen one before and he did not know what to call it. Mrs. Bunker said "she thought she would have sunk into the earth."

Well, you see, when their first child was born, thinking, I suppose, that they would not have much else to give, they gave him the name of Geo. Washington Tucker. Now what's the use of dressing up a poor boy, with such a big sounding name. You see, it makes too heavy a load for an ordinary mortal to carry through life. If he ever makes any thing, becomes a business man, it is a great waste of paper and ink to have to write so long a name. And if he don't make any thing, he becomes a standing joke like the present George Washington Tucker. He has always lived in a hired house, and worked hired land, when he worked any. To tell the plain truth, he has never hurt himself with work of any kind, and though a farmer, has been about as shy of the dirt as his father was before him. I suppose it's wicked, but I never see him in meeting without thinking of that parasol forty years ago. The green of that silk went as straight into that boy as if he had grown on a mulberry tree, instead of being born like other mortals.

Jones came of a better family. His father, Gen'l. Jones was flourishing forty years ago. He had a good deal of money left him by his father, and married rich. The General was mighty fond of cocked hats, epaulettes, and other military fixings, and his wife was fond of French fashions, and extravagant dress. They used to drive through the street in Hookertown, in a splendid carriage, drawn by a pair of black horses, with harness glittering with silver buckles and mountings. Nobody held their heads higher than the Joneses of the last generation. The General's house was crowded with gay company from the city, his wife and daughters dressed splendidly, and gave brilliant parties, where the wine flowed like water, and the dance and song lasted till morning.

The Gen'l. died a bankrupt when the present Benjamin Franklin Jones was a boy of ten. Of course the property had to be sold, and Ben. had to go to work for a living, which was the best thing that ever happened to him, or any other man, according to my notion. He however had got some high notions in his childhood, that has prevented him from succeeding in life. He has never loved work, like one who has grubbed in the dirt, from the time he could grasp a hoe handle. You must begin early with the boys, if you want to make them love work. Rub their noses in it, as soon as they can run, and they will always love the smell of mother earth, as long as they live. But if you dress them in fine clothes until they are ten, and twelve, and then try to break them in, it is just like breaking in a six year old pair of cattle—mighty hard work.

To state the case just as it is, Benjamin Franklin Jones is too much afraid of dirtying his clothes, to get along in life. And these are the kind of folks, you see, that are laughing at Tim Bunker's old hat, and long legged boots, and talking of throwing stones because I live in a glass house. They have the advantage of me in flinging stones, for they haven't got any houses at all, of their own, if I should want to throw back again. My hat is old, as they say, but it is paid for, which is more than can be said of the hats of my illustrious neighbors, George Washington Tucker, and Benjamin Franklin Jones. One was won in a bet at the last presidential election, and the other has been charged in the merchant's book—for more than three years.

Yours to command,

TIMOTHY BUNKER, Esq.

Hookertown, Ct., Oct. 12, 1859.

For the American Agriculturist.

Muck and Lime united as a Manure.

A correspondent enquired in a former number of the *Agriculturist*, whether slacked lime, if mixed with the vegetable production found in our swamps, termed *muck*, would prove beneficial to the soil as a manure? This will in some degree depend upon the quality of the soil, but as a general rule, the answer would be in the affirmative; and I should confidently recommend the process whenever it becomes practicable. The reason why this vegetable material, when mingled with the soil in its *pure* condition, has sometimes proved of so little utility, is owing to the circumstance of its containing a considerable quantity of resinous matter in its composition, which prevents it from undergoing so ready a decomposition as is necessarily required; it being insoluble in water. But by the application of slaked lime, or any other alkaline ingredients, even such as is contained in ashes, they are found immediately to combine with the resins embraced in the muck, and readily produce a soap which is perfectly soluble in water; it then easily becomes washed from the woody fibers, and leaves the hitherto undecaying materials to the free action of moisture, and those other atmospheric agents which facilitate its decomposition. Slaked lime, then, united with muck should be recommended; but it will not answer so well to mix it with other manures which may owe their fertilizing properties to nitrogen, as in this case ammonia will be produced, and speedily pass off to be dispersed in the atmosphere. J. E.

A Common Error in Drainage.

The most of the draining yet attempted in this country is with open ditches, and in swamps. Three cases have recently come under our observation, in which the failure is traceable to a common cause.

Mr. A——, reclaimed a swamp of twelve acres. It was thickly covered with brush, and had made a very heavy turf of roots and moss, a foot or more thick. A deep wide ditch was run through the middle, with a few side ditches running at right angles to the main ditch. There was no ditch put around the border to cut off the springs from the side hill. There was a good fall, and these ditches took off all the water from the pond and made the whole swamp ready for the plow. In 1856 he had good crops, and in 1857 still better, some of the stoutest corn in town. In 1858, the corn was not as good, even with the application of manure, and in 1859 the corn crop is a decided failure. The land had settled somewhat by the decay of the roots and vegetable matter in the soil, and had become so compact that the water from the sides could not readily escape into the ditches.

Mr. B——, drained some four acres with tile running from the edge of the swamp into a main open ditch, in the middle. The tile were put four rods apart, and even with this imperfect drainage, the land was very productive for four or five years, bearing good hoed crops, and still better grass. Last year, it was taken up a second time, and the corn was a failure, owing to the excessive moisture of the land. No border ditch had been made to cut off springs from the upland.

Mr. C——, had some ten acres of low wet land, underlaid by a hard pan, the soil in no place more than eighteen inches deep A small brook run through the middle. The bed of this was lowered some two feet, and two other ditches at a distance of about ten rods were dug, going no

deeper than the hard pan. There was no border ditch—and besides this error, Mr. C. fell into two others—having only one ditch where the land needed three—and digging only eighteen inches, where he should have gone down three feet. The land lies on an inclined plain, has a good fall, and might easily be made to produce two tuns of good herdsgrass to the acre. Instead of that, the wild sour grasses have never been eradicated, and it has never yielded over three quarters of a tun of hay to the acre.

These gentlemen are somewhat inclined to look upon drainage as a humbug, when that term is more appropriately applied to the style of their works. It was not more than half done. A border drain is indispensible, in all cases of reclaiming swamp land. This cuts off the enemy from the outside, and leaves the other ditches to dispose of the surface water.

These open ditches are but a poor substitute for thorough drainage, at best, but they are the first advances toward the improvement of wet land, likely to be made by most farmers. It is of great importance that the errors pointed out in these cases should be avoided.

How Rice is Grown and Prepared for Market.....II.

Prepared by an Editor sojourning at the South.

FLOWING AND CULTIVATION.

However dreary and monotonous the aspect of a rice plantation in Winter, nothing can be more charming than the broad expanse of living green in Summer. Immediately after the sowing of a field, already described, which is usually completed on the same day it is begun, the tide-gate of the trunk communicating with the river is lifted, and the water flows in at the next rise of the tide, covering the whole ground. The design of the first flow is to assist the seed in germinating, and it is hence called the "Sprout flow." The water remains upon the fields for one or two weeks according to the warmth of the season. When the sprouts begin to show themselves in the drills, the water is drawn off, and the ground suffered to dry.

After the plants are well up, showing their points the second flooding is given, called in the technical language of the district "the point flow." The object of this is not only to aid the growth of the crop, but to kill the weeds, which can not live in the water, and thus to save the labor of hoeing. The water remains on until the plants are about four inches high, and strong enough to withstand the birds with which the rice region is infested. After the water is drawn off, and the land is dried, the whole field is hoed, and after remaining dry two weeks, or more, it is hoed a second time. As soon as the weeds are killed, after the second hoeing, the third flowing is made, and the water is raised several inches above the tops of the rice, so that all the dried weeds rising to the surface, may float off, and be gathered up upon the levee for burning. The water is then lowered, so that the plants may just appear above the surface. The plants, at this time, are from six inches to a foot high, according to the forwardness of the season. The water remains on the field for two or three weeks, and from this circumstance it is called the "long flow."

The drawing off of the water at the close of this flow is determined by a particular stage of the growth of the crop, which is only learned by experience. Much of the success of the rice crop depends upon good judgment at this juncture. When the ground is in condition for tillage, the crop is again hoed a third time, and after an interval of two or three weeks, a fourth time, the ground remaining meanwhile dry. Now comes the last flowing, and the water remains on just below the heads of the rice, until the harvest. The hands are now kept busy in wading between the drills, pulling out any weeds that may have escaped earlier notice, and the "volunteer rice." This name is given to the scattering rice seed that remains out over Winter, and comes up of its own accord. It is known by its feebler growth. The kernels are of inferior quality, and though they would add something to the bulk of the crop, they would very much damage its sale. After the rice is headed, the water is raised a little to sustain the increasing weight, and to prevent the tangling of the crop by the wind. Thus it remains until it is ready for the sickle.

This is the ordinary process of sowing and cultivation, varied somewhat by the ingenuity, and the circumstances of particular planters. It will be seen that the flowing plays a very important part in the cultivation of this plant, and it may hence be thought, that it is essential to its success. But crops nearly as large are grown in the upland districts, though with a great increase of labor. A prime object of the flowing is, to save labor in hoeing and tillage. It also lengthens the season of sowing, as no allowance has to be made for the contingency of drouth, the river furnishing moisture just when it is wanted. Thus successive fields can be sown over a period of two months, upon the same plantation, and a much smaller force is required upon a given number of acres, than would otherwise be necessary.

THE HARVESTING

generally begins in the early part of September. After the water is drawn off, a hand takes three or four rows at a time, and cuts them with a sickle. The stubble is left about a foot high and upon this the tops are carefully laid in thin layers to dry. With good weather, it is sufficiently cured in a day or two, and is then bound in small sheaves, and immediately carried to the stack, or barn, which of course must be located at a distance, often a mile or more. The usual method of transportation, for this long distance, is upon the heads of the negroes. This labor being performed under the open sun, at the hottest season of the year, and amid the recent mire, tells even upon the African constitution. The white overseers are much less exposed, but nothing is more common among them than chills and fever, pneumonia, and other diseases, incident to a miasmatic district. The method of culture as now pursued upon the Atlantic coast, keeps the whole region in the condition of a recently cleared country. The whole atmosphere at the harvest season is steaming with rapidly decaying vegetable matter. Whites stay as little as possible in the infected regions, and none but the acclimated can remain over night, without peril to life. The mortality to human life fully justifies the reputation of the rice districts. They are the terror of the negro race.

On some of the plantations, where there is a canal in the rear of the plantation, water carriage is substituted for hand labor, in bringing home the crop. A hand cart or truck, with broad wheels has also been recently introduced in some places, for the same purpose. When brought home, it is neatly stacked in round stacks, and thatched to shed rain.

THRESHING

commences immediately after the harvest, and unless the horse power threshers have been introduced, as is the case on some of the plantations, it is a long and tedious process of several months. Nothing could be more primitive than the process of threshing and cleaning, on some of these plantations. The floor is prepared by beating the earth down hard and smooth. The rice is then spread and beaten with the flail, in the old fashioned way of threshing rye and oats, which has mostly disappeared at the North. The chaff and dust are separated from the grain, by carrying it up on to a platform, about twenty feet high, on the heads of negroes, and pouring it down slowly; the rice falling in a heap beneath the platform.

Steam and horse power, however, are slowly intruding upon these primitive processes, and their economy is so great that they must eventually come into general use. Already, threshing mills, separators, fanners, elevators, and other labor saving machinery are to be found in the rice districts, as perfect as any other agricultural region can boast.

HULLING.

The coating, or shell adheres to this grain with the greatest tenacity, and it can only be removed, by a machine that cracks the hull, without breaking the kernel within. But where these machines have not already been introduced upon a plantation, it is found to be better economy to sell the crop in the rough state. In most of the large cities, whither the crop is sent to market, there are hulling machines of more perfect construction, and the cleaning is done better and cheaper on a large scale than it can be on the plantation. It is probably true, also, that the commission merchant finds, that the article makes a voyage in better condition in the rough state, and that it is more inviting and saleable, when it comes fresh from the hulling mill.

The product of an acre in rice is from thirty to sixty bushels, and sometimes as high as a hundred. The usual price in the rough state, in the three rice ports, Charleston, Savannah, and Wilmington, is from eighty cents to a dollar. Factors residing in these cities are employed to make the sales, and this is usually done by samples.

Is the Horse-Chestnut Hardy?

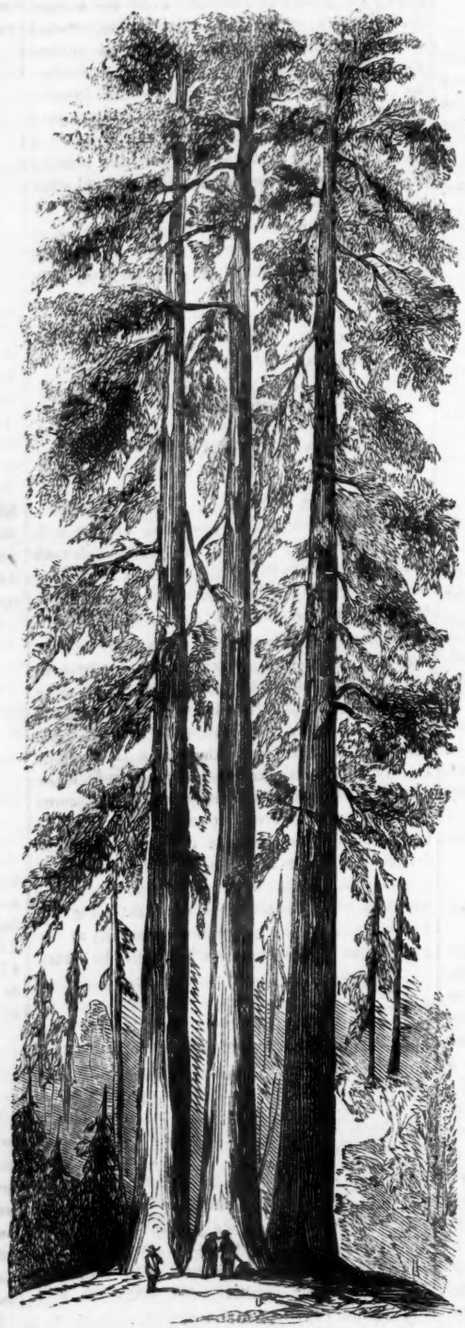
It will surprise many to have this inquiry started. They have supposed it as hardy as the elm or oak But we confess to having formed the opinion that it is *not* perfectly hardy. Its Asiatic origin would suggest the probability that it might suffer from the vicissitudes of our climate. For the last five or six years, we have noticed numerous specimens of diseased and mutilated Horse-chestnuts. The tree suffers from a kind of blight, affecting its bark on the sides exposed to the sun, resembling the blight of the cherry-tree.

It first appears on trees six or eight feet high, and within one foot or eighteen inches from the ground. It begins in the form of cracks in the bark, which increase in size and number for several years, until at length the bark falls off, exposing the wood and producing rottenness in it. Sometimes the wound heals over, but more often the blight extends until the tree succumbs, and falls to the ground.

As this blight always appears on the south and south-west sides of the tree, and generally is first seen in the early Spring, it is probably owing to the combined action of sun and frost. Some careful planters are beginning to guard their trees in Spring by setting a board on the exposed sides. We have used a section of bass-wood bark, a little larger than the tree to be protected, fastening it with strings to the tree, and removing it during the Summer. A tree of so great general excellence as the Horse-chestnut should receive all needful care to preserve it in health and vigor.

The "Big Trees" of California.

Far up among the recesses of the Sierra Nevada (snowy mountain ridges), which were unvisited by civilized man before the search for gold sent prospecters into every hidden corner of the mountains, stand isolated groves of giant trees which are wonderful even in California, that country of remarkable productions. Indeed, for size and magnificence, they are unequaled by any in the world. What Niagara is among cataracts, or Mount Blanc among mountains, these noble evergreens of California are among trees—the grandest of their kind. Other trees may have the charm of historic association, like the cedars of Lebanon; or like the famous Banyan, be remarkable for the peculiarity of their growth; but these, with their wide spread bases and their lofty tops reaching heaven-ward, seem to typify the solid character and onward progress of the vigorous young state in which they are found. Near the head waters of the Calaveras river is found one of the most noted groves of these forest giants or "big trees" as they are termed in California, a group of which is represented in our engraving. These three, known as the "Three Sisters" are each about *ninety-two feet* in circumference at the base. Figures we know are rather uninteresting, but as neither our engraving or description can give a proper idea of the immensity of these trees, let the reader take for comparative measurement the size of the house he occupies, or the hight of the nearest church spire or some other familiar object as a standard of comparison, and he will then be able to form some correct notion of their grand proportions. A friend of ours, whose statements are perfectly accurate, visited the Calaveras grove just after one of the largest trees had been felled. He paced the circumference of the stump of this tree and found that it took thirty one paces (of three feet each); while the prostrate trunk measured three hundred feet in length. Of course a tree of this size could not be cut down in the ordinary way, with the ax; so recourse was had to boring with large pump-augers. It took five men twenty-two days to bore through and through until the connection was completely severed; even after this was accomplished the tree stood unmoved, the monarch that had withstood the mountain storms of centuries was not to be so easily dethroned. Two more days of hard work at driving large wedges with a battering-ram were required to bring him down. This tree was felled by a party of speculators who wished to procure a section of the trunk for exhibition, a most wanton act of destruction, and one which we are rejoiced to hear did not pay as a speculation. The trunk of this tree lays where it fell, but the stump has been leveled off and serves as a dancing floor for the use of the numerous parties who visit the grove. Near the tree of which we have spoken grew another, of still greater size, which was many years ago prostrated by the joint action of fire and wind. This, at three hundred feet from the but, is forty feet in circumference, and must have been between four hundred and fifty, and five hundred feet in length! The trunk of this tree is hollow, with an opening so large that a man on horseback can pass through it without inconvenience: our friend, when asked if he tried this novel ride, replied that he could not "as there was a river going through just then"—his visit being in the rainy season. The botanists have given the name of *Sequoia gigantea* to the big tree; other names such as Washingtonia and Wellingtonia have been proposed for it, but it is found to belong to the old genus *Sequoia*, to which the celebrated Redwood of California belongs. The wood of the big tree resembles the Redwood (which is very much like our Red Cedar). The nearest relation to the California tree, now living in the Atlantic States is the Cypress. Mr. Greely, who lately visited the Calaveras grove received the singular information that the trees produced neither "seed-cone nor nut." The friend whom we have above quoted says that when he was there, in May, the ground was completely covered with fallen cones and seeds. The cone is about the size of a pullet's egg, and very hard and woody.—Much has been written concerning the age of these trees and the various estimates have ranged from eighteen hundred, to many thousands of years. One writer makes them out to have been of considerable size at the time Moses was found in the bulrushes! A section of the trunk of the tree which was cut down was carefully examined by Prof. Torrey, who counted all the rings and could only make about eleven hundred. Though the true statement destroys some of the fanciful ideas with which writers have invested them, they are still of sufficient age to command a respect which shall prevent their further destruction and allow them to stand in future ages as they are now, the most wonderful representatives of the vegetable kingdom.



THE "THREE SISTERS."

Autunmal Foliage.

Again, the Fall is with us. It is the fall of flowers in the garden, of fruit in the orchard, of nuts in the woods, of leaves everywhere. Expressive old Saxon word, the "Fall." How noiselessly and almost unperceived, this season has been ushered in. While we were engaged in summer toils, or summer enjoyments, the wheels of nature kept on their rapid revolution until, ere we were aware, the flowering season had fled away. At the axil of every leaf, on every tree and shrub, Summer packed away her next year's wardrobe, in little oval cases, water-proof and frost-proof. She prepared her seeds of grain, and grass, and flowers, and did all the other work expected of her, and then sat down to rest. Even before this was accomplished, a careful observer could see that Autumn was just at hand. A russet hue tinged the forest; here and there a maple branch turned crimson, and ripened leaves from other trees rustled to the ground. Then, not long after, came the Frost King, and with magic brush painted all the hills. Say rather, he gathered all the rainbows of Summer and threw them in broken fragments upon the earth. O, the gorgeous woods! What a brilliant pageant do our eyes behold! Is it, indeed, reality, or some fair vision of dream-land!

The striking displays of American foliage in Autumn, have long been the poet's theme, and

the painter's study. In England and on the Continent, such scenes are unknown. Foreign poets tell us of "sallow autumn,"

> "Shade deepening over shade, the country round
> Imbrown: a cloudy umbrage, dusk and dun,
> Of every hue, from wan declining green
> To sooty dark."

With us, how different the scene. Almost every tree contributes a distinct and peculiar shade to the picture. The chestnut and birch present a a golden hue; the sweet gum is vermillion; the pepperidge and white ash furnish several shades of purple; the bass-wood is orange; the tulip-tree lemon; the sumach fiery scarlet; and the maples, gayest of all, present nearly every color, running through yellow, pink, scarlet, crimson, purple, and sometimes all of them commingled on a single tree. The oaks, in stately dignity, about the last to change, are brown, gray, chocolate, red, and sometimes purple.

As to the natural cause of this phenomenon, scientific men are not wholly agreed. Plainly, it is not entirely the work of frost; for some leaves change color before frost comes, and girdling or bruising a limb will produce similar effects. Yet, obviously, this is the principal agent. The change produced by frost is purely a chemical one, and is well exhibited in the following sentences: "When a tree or plant is in full activity, its foliage absorbs carbonic acid, and disengages oxygen. When, now, through the influence of a sufficiently low temperature, or from any other cause, the functions of vegetable life are suspended, and the fluids cease to circulate, the leaves no longer disengage oxygen, but in common with all dead bodies, absorb this gas, which, forming an acid, changes the color of the leaves, either to yellow, red, or some intermediate shade, depending on the quality of the matter present in its leaves." It has also been asserted that this acid can be neutralized by an alkali, and the green restored. We hope this explanation is perfectly satisfactory to our philosophic readers; but we must confess that such a scientific analysis of a scene of beauty adds very little to our enjoyment of it.

Winter Protection of Trees and Plants.

Fruit and ornamental trees planted this Fall, are benefitted by a mound of earth a foot high, thrown up around the trunk. Let this earth be brought to the tree from another quarter, not taken off from the extremities of the roots, and so exposing them, as is too often done. Such a mound will keep the trees steady against the wind, and protect the trunks from the inroads of mice. Cunning as these vermin are, they don't know enough to ascend a bank of fresh earth in search of green fodder. For pear-trees, subject as they are to frozen sap-blight, we would suggest the additional defence of a light board or section of bark set up against the south side of the trunks. A hay-band wound on loosely, answers a good purpose. Dwarf pears need special care in Winter, if the ground continues bare. Their roots need a covering of manure or a mound of earth.

As to cherry trees, do the best you can, and even then, expect some injury and loss in the northern States. For the splitting of the trunk so common, the protection recommended for the pear tree is worthy of trial.

Grape vines not perfectly hardy should be laid on the ground and fastened there, and then covered with litter or a few inches of soil. So of tender roses and shrubs; they may be bundled up in straw, or covered with matting or evergreen boughs, but they are generally safer if bent to the ground and covered with a little earth.

Prune Grape Vines Now.

This is the best month of the year for pruning the grape. It can not well be done in Winter at the north, because the vines are, (or ought to be,) laid on the ground and tucked up for the season. Neither can it well be done in the Spring, because the sap begins to flow very early, and profuse bleeding would ensue. If done early in November, the wounds become healed before Winter, and the buds left on the canes gather up a good supply of elaborated sap for next year's use. It is also a pleasant time to work, and the pruning will more likely be well done, than it would amid the storms and benumbing frosts of Winter.

1. Is your vine a young one, and do you propose to try the "renewal" method? Then, if it has two stout canes, six or eight feet long, (see

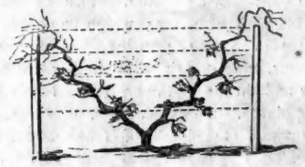


Fig. 1.

Fig. 1.) cut each of them off to about four feet, and tie them down to the lower bar of your trellis. (See Fig. 2.) One or two buds on each cane may be allowed to throw up branches next year, and the buds on each end may send off branches for extending the horizontal cane at the base.

Or, possibly, your vine is five or six years old, has this year borne fruit on several upright branches, and has meanwhile sent up as many more new shoots between the old (Fig. 3.). Then, all you will have to do this Fall, is to cut off those bearing branches down to the horizontal canes on the lower bar of the trellis. At the foot of those branches, you will undoubtedly find several plump buds which will throw up new branches next year, to fill the places of those cut off. The branches of the present year's growth may now, if stout and healthy, be cut off at the top of the trellis, if weak, considerably below that (Fig. 4.). The branches which pushed out from buds at the ends of the horizontal canes may now be short-

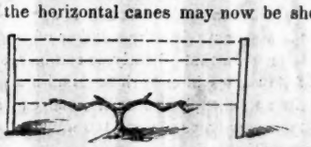


Fig. 2.

ened back, leaving two or three new buds of the new wood, and then tied down to the lower bar.

2. Some persons prefer the *spur-method* of pruning; and perhaps our present reader does. If so, possibly you have a young vine, something like Fig. 1. All you will have to do this Fall, is to shorten the canes about one half their length, and cut off any lateral branches that may have shot out from them.

Or the vine may be several years old, and may have been trained systematically into the shape of Fig. 3. Then, your work now is to cut

Fig. 3.

out any thin watery shoots that may have sprung up between the bearing branches, robbing them of their strength and shading the fruit. The bearing canes should always be kept two feet apart, to allow room for the side-spurs to shoot out and mature their fruit without being overrun with superfluous wood. Finish your work, now, by cutting back the spurs on the upright canes to one or two buds. These buds will bear fruit next year, if properly cared for.

Fig. 4.

Or your vine may have taken a more irregular shape, and looks something like Fig. 5. below. You must then, as before, simply cut out all weak, succulent shoots which have sprung up from the root or sides of the stock, and thin out the canes all over the trellis, so as to leave them evenly distributed over its surface, about two feet asunder. Shorten in also the spurs on the sides of the old wood to one or two buds. If here and there an old cane has lost its buds, it should be cut clean out, and a young and healthy one trained up in its place.

For partially tender vines like the Diana, this last method of training, (Fig. 5.) though less pleasing to a gardener's eye, is, on some accounts, preferable to the other, (Fig. 3.), because the canes can be more easily bent to the ground in the Fall for Winter protection.

Pruning having now been accomplished, all the

Fig. 5.

vines may be untied from the trellis and laid upon the ground. Be careful, while doing this, not to break off the buds. If in a very cold region, it may be well to remove the soil a few inches, fasten down the canes with stakes, and throw on a few inches deep of soil. In central New-York, a little rubbish from the garden and an old board or two, to keep the canes flat on the ground, is all the covering required.

When to Transplant Trees.

This is one of the "vexed questions" in horticulture, and it is sure to come up with every returning Spring and Fall. The nurserymen, who have acres of trees to sell, maintain that *both* seasons are the best. Planters who have had their best success in one particular season, declare that *that* is the best. And if we should collect a mass of testimony from all quarters, we should find a large number ranged on both sides.

Let us look at this disputed question awhile, both in principle and practice.

1. So far as theory is concerned, there is a good deal to be said in favor of Fall planting. A tree newly dug up, is very much in the condition of a cutting which the gardener wishes to "strike." The cutting is placed in a light soil a few degrees warmer than the surrounding atmosphere. Over the cutting a bell glass is set to prevent excessive evaporation from bark and leaf. The bottom heat excites the forces of the shoot, causing it first to form a callus over the wound and then to emit roots, before the leaves push from the top. So, in setting out a tree, we wish first of all, to heal over the wounds made in digging it up, and

then to get new roots to supply the loss of those cut off by the digging spade. Of course, then, we should plant the tree at that season when the earth is a little warmer than the air above ground, and when the branches will suffer least from evaporation. Now, is not that time in the Autumn, before cold weather sets in? Moreover, the experiment has been tried, and it has been found that trees, set out early in the Fall and then taken up again on the verge of Winter, have formed a mass of fibrous roots, and have become so well established in the ground that they would have grown the following year with considerable vigor.

It should be considered that the prevailing dampness of the air in the Fall months is more favorable to the health of the tree, than the cold, dry winds of Spring. Then, again, the ground is generally in a better condition for working in the Fall than in the Spring. Autumn is also a season of greater leisure than the Spring, and so ensures the better performance of the work. It can not be repeated too often or too emphatically, that the greatest cause of the failure of newly planted trees at any season, is the hasty and imperfect manner in which the holes are dug and the soil prepared for filling in around the roots. The long mild days of Autumn afford just the needful time for making all this preparation before the trees are dug up. Then, again, if one is to purchase his trees from a nursery, he has a better assortment to choose from in the Fall than in the Spring.

2. Let us now turn the tables. Admitting all that has been said in favor of Fall planting, it yet remains true that tender trees and plants can not be removed at this season as well as in the Spring. The process of digging up trees, whether hardy or tender, carefully as it may be done, destroys a multitude of roots and fibers on which the life and health of the tree so much depend. But as a matter of fact, seven-eighths of all trees dug up are *not* taken up with care; the roots are chopped off with a merciless spade, and more or less split and bruised, and after that they are left exposed for a considerable time in the sun and wind. The work of re-planting is often done in the same barbarous fashion.

Again, trees are not generally set out early enough in the Fall, to enable them to heal over the wounds made and to form new roots before the setting in of cold weather. If planted late, they can not form a living connection with the soil, but stand all Winter very much in the condition of a post. Or again, if heavy rains fall, after planting, the ground becomes soft like mortar, in which the tree blows about, making a hole around the trunk, exposing the roots to the wind and to subsequent frosts. It frequently happens, also, that when the tree sways about in Winter against the frozen sides of this hole, the bark is chafed off completely. Moreover, if the soil is stiff and subject to standing water, the dormant roots become gangrened and perish, or are thrown out by the frost.

3. On the whole, then, (if we venture any advice,) we should say if one has much planting to do, he had better divide his work between Fall and Spring. But if he plants in the Fall, he should see to it that his ground is well drained and the soil well pulverized. If planting an orchard, the whole surface should be plowed and manured. He should take up his trees as early as possible after the frost checks vegetation, not waiting for all the leaves to fall: strip them off if they are very abundant. He should protect his trees in some way, against being blown about by the winds. This may be done by fastening them to stakes with wisps of straw, or leather bands, so as not to chafe the bark. A very good method is to make a hillock of dirt, a foot high around the collar and spread over the roots. This will keep the tree steady, guard it from excessive frost, and against the girdling of mice. The mound should be removed in Spring. Among the trees most suitable for Fall planting, are the apple, pear, cherry, plum, and native forest trees generally.

If one has not time to plant all his trees in this thorough manner, he had best leave a part until Spring. Half-hardy varieties, and evergreens in particular should not be disturbed in the Autumn. If for any reason it becomes necessay to remove the first named in the Fall, they should be "heeled in" in some dry, sheltered spot for the Winter, where they will not be exposed to bright suns or to piercing winds. They should then be set out early in the following Spring, before the growth commences. Those trees which generally succeed best in Spring planting, are the peach, dwarf-pear, apricot, quince, all tender ornamental trees and shrubs, and evergreens. Hardy, early starting plants, such as pæonies, dicentra, rhubarb, currants, etc., should, of course, be set in the Fall.

What Varieties of Fruit to Plant.

In our last (October) number, we gave an article entitled "Plant Fruit Trees." We now talk of *what varieties to plant*. And first, we will name the APPLE, as this, after all, is the great and universal staple of the farmer's fruit crop. Other *tree* fruits are so local in their extent of cultivation for market, beyond what are wanted for mere family use, that we postpone their discussion for a future number.

For market purposes the farmer wants a variety of apple which is hardy in the tree, a constant bearer, if possible, vigorous in growth, and a popular, as well as decidedly good fruit *in its season*. As to the season of ripeness, he must adapt that to the demands of his market. Early apples are perishable; therefore he must only have such a number of early trees as will give a supply for two, three, or four weeks in succession. So with the Autumn apples; but their season being longer by a few weeks, the number of trees can be greater than that of early or summer apples. Next follow the winter varieties, and if a market be easily and cheaply accessible, one can scarce have too many trees, or pay too much attention to their cultivation.

Now as to the sorts. Find out which the public most want, or which are most salable in market, and if you can grow these varieties, put three-fourths, or even nine-tenths of your trees into them alone. Let the others be of any "fancy" variety you like, but let your "crop" be alike—sure, only, that it is *good*. Two varieties are enough for *early* fruit—one acid, the other sweet. Wherever they will grow, the Early Harvest, and Sweet Bough are the best, and most popular. If you can not grow these, get the next best varieties corresponding to their season, and so on, caring for no others, only by way of experiment, or for variety. Your apples become known, and the demand is always sure. You will find your account in it.

For Autumn fruit, commencing early in September, and ending early in December, three, or at most four varieties, are sufficient—one or two sweet, the other one, two, or three, sub-acid, or tart, each following the other in the season of ripening. The varieties of apple best suited to the soil, position, and climate, are so various, that we shall hardly venture to recommend any particular ones as best for all localities, and therefore will only advise you to select popular fruits where you live, or where your market is, and stick to them almost without exception. Cooking into pies, tarts, sauces, baking, as well as drying, are the chief uses of the Autumn apples, and for these purposes they should be of good size, fair in shape and appearance, of agreeable color—red or yellow, usually—with crisp, and juicy flesh, and well flavored. Such are also good for cider, if you make the article.

As Winter varieties, and carrying them further into the Spring, or even early Summer eating, two, three, or four sorts are enough; as the Rhode Island Greening for early and mid-winter, the Spitzenberg, and Baldwin, for late winter and early spring, and the Roxbury, and Golden Russets for late spring and early summer. We do not recommend these varieties solely, but as samples of succession in ripening, and which are widely cultivated in the Northern States. Further South, and West, are many local varieties better suited to the soils and climates than these, which we would have in their places; but the *succession* should be the same. A sweet, as well as a tart apple should be in each season—the former for baking, being usually preferred, while the latter is most popular for cooking in pies, sauces, or dumplings.

Thus, a dozen varieties, at the extent, are all that even the most extensive orchardist need cultivate, and less would be quite as well. In fact, he who grows but two, or at the extent, three kinds of good winter apples, finds his account in it better, usually, than he who grows half a dozen sorts. We have often gone into a large orchard, and found half the fruit worthless, or wasting, near a large *winter* market, because the apples were of the *wrong* kinds, being an over-crop of Summer and Autumn varieties, when if every single tree had been a winter apple, a brisk demand would clear every tree of its burthen at a round profit. We know it is hard to resist temptation in multiplying varieties. Some esteemed friend will recommend a certain kind *he* cultivates, or has seen growing elsewhere, as "so good;" or your own eye, and taste, will be so tempted by a new thing that you yearn to "try" them. But pay no attention to these, if you already have satisfactory kinds. We don't believe that we have a really superior apple in our orchard, of a variety less than fifty years old, unless it be one which has sprung up as a *seedling* in a newly settled district. A friend of ours, planting largely, some years ago, was so taken up with a new apple which had lately been brought into notice, and so widely puffed in the pomological papers, that he grafted it into near half the trees in his orchards, and after cultivating, coaxing, pruning, and trying them for a dozen years, and getting but two or three satisfactory crops in the whole time, while his long established varieties were yielding their annual crops in abundance, he had to go back, head down his new-fangled things, and graft in the old sorts, losing hundreds, if not thousands of dollars by his folly.

Better winter apples need not be desired, *when they will grow*, than the Newtown Pippin, the Spitzenberg, the Rhode Island Greening, the Swaar, the Roxbury and Golden Russets, among the sub-acids, and the Talman Sweeting among the sweet ones. We know it is hard work to keep our fingers off the *whole* of these, but if we were to grow apples for a livelihood, we would confine ourselves to two or three of them alone.

If the brain sow not corn, it plants thistles

For the American Agriculturist.

One Reason why Apples fall before Ripe.

During the month of June a small brown moth, called the codling moth, lays its eggs upon the blossom end of the young fruit. From these eggs, a minute worm is hatched, which immediately burrows into the substance of the apple, and makes its way to the core. This causes the fruit to ripen before its time, and it is easily shaken from the tree by the wind, when only half or two-thirds grown, and worth little or nothing. When fully grown, the worm leaves the apple, and creeps into a chink of the bark of the tree, or other secure place, spins his cocoon, and waits till the season for coming forth arrives. In some instances this takes place the same season, and thus Autumn fruit is frequently much injured by the second crop of worms. By keeping the loose rough bark scraped from the trees, they are less liable to be infested, as they afford less shelter for the worm. The worm-eaten fruit should be gathered and fed, or otherwise disposed of to destroy the worms. ORCHARDIST.

What Variety of Apple Seeds to Plant.

To the inquiries of Mr. Jno. Strong, Huron Co., O, we answer: If it is intended to raise seedling trees to obtain new varieties of apples, it is advisable to procure seeds of the best known varieties of fruit, as these will be more likely to yield superior kinds. Where the object is to raise stocks for grafting with improved fruit, it is better to sow seed from natural fruit. The stocks will be more likely to grow up hardy and vigorous.

How we got our first Crop of Plums.

It was upon a loose gravel, where that slippery rascal, the curculio, revels, sweeping every thing before him, as clean as the locusts of Egypt. The varieties were Green Gage, and Imperial Gage, young vigorous trees, but old enough to have borne fruit three years ago. They had blossomed and set fruit, several years, but not a specimen had escaped the fatal incision of the little Turk.

Last Spring, we determined upon a vigorous warfare with the enemy, resolved, that if he got the fruit, this year, he should earn it. We procured a barrel of air-slaked lime, and as soon as the blossoms began to fall, and the fruit was fairly set, began to shower the tree with the powdered lime dust every morning, while the dew was on. This we followed up for three weeks, until all danger was past. The plums set well, grew well, and the most of them matured in tip-top condition, large greenish yellow, juicy fruit—where never a plum grew before.

We have pretty much made up our minds that many men are too slothful to grow this very fine fruit. It requires a little attention every day, early in the morning, before a good many people are astir. The essential thing is, we apprehend, to follow up the enemy with sharp practice, and, we think, almost any remedy that involves this disturbing of the trees, every day, will succeed. The instinct of the curculio leads her to seek a quiet place to deposit her eggs. This is seen in the fact that she drops upon the sheet as soon as the plum tree is jarred, or disturbed, in any way.

The sprinkling of lime, or ashes, or dry dirt, upon the trees, alarms the insect, and leads her to seek some more quiet place, for her deposit. The application of whale-oil soap, or the salt and lime mixture, or sulphur water, accomplishes, in part, the same purpose. It may be that these applications, both dry and wet, have something offensive in them, which hastens her departure, but, we think, the main thing in all curculio remedies, is the disturbing of the trees, and making the quarters of the enemy too hot for him.

At any rate, the lime did the work for our little torments, and we bagged the plums with as much satisfaction as if they had been nuggets of gold. Nobody but smart people can expect to eat plums raised on a sandy or gravelly soil. Get a barrel of lime, this Fall, take out one head, and let it stand in any dry place, until next Spring, and it will be ready for use.

Root Structure—A New Discovery in England, an old one Here.

To the Editor of the American Agriculturist.

I have just read the article in your October number entitled: "Root-Structure—Physiological Curiosity;" being an abstract of an article in the (London) *Gardener's Chronicle*, about some new discoveries of Prof. Henfrey in England, concerning the formation and growth of the root. Now the greatest physiological curiosity about the matter, as it appears to me, is, that what has been (or ought to have been) familiarly known in this country for the last ten years, should be heralded in England at this late day as an important "*discovery*." I send you an extract from a pretty well-known school-book, from an edition published in the year 1850, which your readers may compare with the article in question:

"It (the growth of the root) begins by the production of a quantity of new cells (by division) at the extremity of the radicle; *not on its surface, however, but beneath its thin epidermis and the superficial cells*....In this way the root grows onward by continual additions of new material to its advancing extremity; lengthening from the lower end entirely or chiefly, so that this part of a growing root always consists of the most newly-formed and vitally active tissue. *The new cells, however, do not occupy the very point, as is commonly, but incorrectly, stated. This is capped, as it were, by an obtusely conical mass of older cells*, consisting of the superficial tissue of the end of the radicle, pushed forward by the cell-multiplication that commenced behind it, as already mentioned. As the original cells of this apex wear away or perish, they are replaced by the layer beneath; and *so the advancing point of the root consists, as inspection plainly shows, of older and denser tissue than that behind it. The point of every branch of the root is capped in the same way.* It follows that the so-called *spongioles* or *spongelets* of the roots have no existence. Not only are there no such special organs as are commonly spoken of, but absorption evidently does not take place, to any considerable extent, through the older tissue of the point itself."—*Gray's Botanical Text Book*, 3d edition, 1850, p. 81.

As a following number of the *Gardener's Chronicle* goes on to speak of the *root-hairs* or *fibrils*, and their use in absorption by the roots, as another important novelty, just brought to notice by Prof. Henfrey, and by Messrs. Garreau and Brauwers,—it may be well to continue the quotation from the *Botanical Text Book*, which proceeds thus (omitting the references to the original figures which illustrate the subject):

"As to absorption by roots, the inspection of the root of a germinating plantlet, or of any growing rootlet, even under a low magnifying power, shows that they must imbibe the moisture that bathes them by endosmosis through the whole recently-formed surface, and especially by the *hair-like prolongations* of the exterior layer of cells, or fibrils, as they may be termed, *which are copiously borne by all young roots*. These capillary tubes, of great tenuity and with extremely delicate walls, immensely increase the surface which the rootlet exposes, and play a more important part in absorption than is generally supposed; for they appear to have attracted little attention." p. 82.

G.

Blackberries from Seed.

To several queries called out by the offer of seed in the October *Agriculturist*, we reply: The seed, sown in Spring, will send up only small plants the first year. On these there may be a few chance berries the *next season*. The Spring after planting a number of pretty strong canes will be sent up, if the soil be of good quality, and these will yield a fair crop of fruit the next Summer, besides an abundance of plants for fruiting the following season. Plants put out in Autumn should yield a fair growth of canes the next season for fruiting the following year. Plants set in Spring will not produce so large a growth of canes, usually, as if set in Autumn, so as to be ready to grow on the first opening of the ground. By setting the roots instead of planting seed, there is a gain of one year in obtaining fruit, and usually of two years in getting a large yield. So it is always preferable to secure the *roots* when possible. Our design in offering *seed* is only to put it in the power of those who can not get the roots, to secure plants by waiting a year or two longer. We desire to have every reader of the *Agriculturist* supplied, as early as possible, with the luxury of a home supply of the magnificent New-Rochelle Blackberries.

Fall Work in the Kitchen Garden.

I. *Cleaning up.*—Potato tops, beet and carrot tops, bean, melon, cucumber, and squash vines, and in short, all rubbish of this sort should be gathered up neatly and thrown into one corner, for use in the compost-heap, or for protecting tender plants. Pea-brush, bean-poles, frames for tomato vines, boxes for melons, and all such perishable materials should be well housed before Winter. They will then last several years. Nor will it be waste time or labor, to give the whole surface of the garden a good hoeing, to extirpate the weeds which have sprung up in beds and alleys, during the fall rains.

II. *Protecting.*—Every good garden has some plants which need this care; for instance, several of the best kinds of strawberries, raspberries, blackberries and grapes. Over the first, spread an inch or two of manure, or leaves, or tan-bark. This will prevent the heaving out of the roots and the blasting of the fruit-buds. Such raspberries as the Red Antwerp and the Brinckle's Orange should be bent to the ground and pinned down with stakes; then lay over them a little rubbish (mentioned above,) and throw over this a few inches of dirt. The New-Rochelle blackberry is benefited by the same treatment north of lat. 42°. These fruits *may* sometimes go through the winter unprotected without injury, but, to make sure of a crop every year, they should be slightly protected. Most of the better sorts of grapes now planted are hardy, yet it is best, sometime in this month, to untie them from the trellis, and lay them carefully on the ground, and throw over a little litter or dirt. Even if the danger of loss is not very great, one feels better during the vicissitudes of winter, to know that his choice vines are snugly sheltered; and when in Spring one lifts up his canes and ties them to the trellis, he feels quite sure that they will yield him a bountiful crop. And when he gathers the beautiful clusters, he feels repaid for his labor a thousand fold.

III. *Ridging up the Ground.*—For light sandy soils, this is not necessary, but for all soils it is very useful. Dig the trenches two feet deep, throwing up some of the subsoil to the action of the frost. This will pulverize it, and prepare it for growing plants. Ridging up also exposes the seeds and roots of many weeds to the frost, and upsets many growing families of noxious insects. It serves, too, to drain a garden; when Spring opens, the ground dries off much sooner than it would if it had lain a dead level, and is ready much earlier for receiving the first crops.

Crysanthemums—Value—Cultivation.

Everybody should have Chrysanthemums. "Why?" Because they are beautiful, are very easily grown, and what is their highest recommendation, they are in full bloom late in the season, long after other flowering plants have been cut down by frost. Even when the snows of Winter have fallen, the chrysanthemum, a solitary occupant of the flower border still lifts its head gay with a profuse bloom of yellow, pink, rose, red, white, purple, and intermediate colors. Some of them are of a single color, while others sport various tints on a single flower. As October, November, and even December wear away, and its companions, one by one, yield their fragrance and their petals to the rude winds and biting frosts, and are disrobed of all their beauty, the perennial chrysanthemum braves both storms and frosts, frequently until mid-winter.

As a *lengthener* of the floral season, therefore, this plant is to be highly prized, apart from its own inherent beauty. Nor is it wanting in the latter quality; a collection of choice varieties—whether of the older tall-growing sorts, or of the more recently introduced pompones—forms as attractive a show as can well be found among the earlier bloomers. They thrive under such neglect, even, as scarcely another plant will endure.

Until recently only a few coarser sorts were cultivated, often under the name "Artemesia;" but we now have more than 200 varieties named and figured in the catalogues of florists, including many dwarfs or pompones, called by the Chinese "Chusan Daisy." The large flowering kinds grow from 2 to 4 feet high; the pompones, 6 to 12 inches only.

Most of the varieties can be obtained of the nurserymen at 25 cents to 50 cents per root. Some of the newest and rarest sorts are higher priced, at first. These roots may be set out in Autumn or Spring, at any time when the ground is unfrozen.—They are increased from year to year by dividing the roots into a number of parts and resetting each. The commercial nurserymen increase them rapidly by taking the stalks, cutting them into slips 4 to 6 inches in length, and setting these slips into pots filled with prepared soil, even in any light garden soil. They usually take root readily with a little care as to shade and moisture, but ordinarily for home culture it is safer to propagate by dividing the roots. Two or more neighbors may well procure each a different assortment, and then exchange with each other. Though very hardy, and adapted to general out-door culture in almost any climate, chrysanthemums are also suited to pot-culture, in the green-house, parlor, or conservatory where they are usually trained in single stalks pinched back to form a bushy head. They also force well, and can be brought into bloom at any season of the year, or at all seasons. Like dahlias, the names of varieties are so numerous that it is difficult to advise what to select. The catalogues of dealers usually give short descriptions of the different kinds from which a selection may be made. Some further information may be found on page 52 of this volume (Feb. No.)

Protecting Roses for the Winter.

Almost every kind of rose is benefitted by protection in Winter. A few, like the old Cinnamon, may go through unscathed, but most, even of the hardy June roses, are killed back several inches, and the flower-buds of the remainder seriously injured. To make sure, therefore, of a *good* bloom, every year, it is best to give all roses suitable protection.

The tall Prairie roses should be loosened from their frames, poles, or verandas, and laid flat upon the ground, and fastened there with stout pegs. If one has no care for looks, he may simply lay a stick or two of wood, or a few boards, on the branches to keep them down. The common garden or June roses should be fastened to the ground in the same way. As some of them are hybrids, with a little tender blood in them, it is well to throw a few leaves and a few shovelfulls of dirt over them. Hybrid Perpetuals, or Remontants, are a little tenderer, and should have a thicker blanket. After pegging them to the ground, draw up a little bank of good soil around the collar of each plant, throw over the branches an inch or two of forest leaves or other litter, and then finish with a little soil over the whole.

The Bourbons, Chinas, Noisettes, and Tea roses, are, as a general rule, too tender to be wintered out of doors, north of New-York. In the writer's own experience, in Central New-York, the hardiest among the Bourbons are Hermosa, Bon Queen, Mad. Bosanquet and a few others; while those fine varieties, Malmaison, Jupiter and Paul Joseph, very often die, or come out in Spring, half dead. Among the Chinas: Agrippina, Sanguinea, and the Pink Daily, are the most robust, yet these perish every few years. Among the Noisettes: Aimée Vibert, Champney's Pink Cluster, and Caroline Marinesse, are some of the hardiest. The Tea rose must be wintered within doors. If one has a green-house or cool pit with glass frames, all the Bourbons, Chinas, Noisettes and Teas are best transferred thither in November, and kept in pots, or "heeled in" until Spring.

But for those who have not such conveniences, we give the following method which we have practiced with considerable success: Early in this month, bend the tops to the ground and cover them with leaves several inches thick, put a mound of old manure around the collar of each bush, and set two boards over every plant, nailed together at the edges, so as to form a roof for shedding water. If the ground has been well drained, this method will answer a very good purpose. South of New-York, even less than this care is sufficient. In Pennsylvania, Virginia, and southward, a few evergreen boughs have been found an excellent protection.

Flower Pit.

For want of a suitable place to keep perennial flowering plants, many persons leave their choice bloomers in the ground over Winter, with the certainty of their being destroyed, and an uncertainty of obtaining others of equal beauty another Spring. Few know how easily and how cheaply a protecting *pit*, like the one here represented

can be made. All that is necessary is to select a *dry* spot of the garden, dig a hole three feet deep, and of the size required to contain the plants. Board, stone or brick up the sides, put in the plants, and cover the whole with boards and straw, or earth, and it is complete. The form should be a parallelogram, not over five feet wide, and as long as may be needed. If there is any probability of water settling in at the bottom, make a drain to carry it off. To make it doubly secure against freezing, an inside lining of boards is sometimes used. If only for a temporary pit, the sides may be made of posts and boards without the stone or brick work. Having placed ten-

der roses, geraniums, verbenas, fuchsias, petunias, etc., in them, upon the approach of freezing weather, cover with boards, and as it grows still colder add straw or leaves, and finally earth, if needful. Do not shut out the air entirely, until absolutely necessary, and ventilate at all suitable times during the Winter. Remove the covering gradually in the Spring, to harden the plants.

PREPARING CUTTINGS.—Now, before hard frosts set in, gather cuttings for next Spring's use. Take them from the currant, gooseberry, grapevine, and from such ornamental shrubs as the syringo, tartarian honeysuckle, deutzia, etc.; bury them in light dry soil, either in the garden or cellar, and let them lie until the opening Spring.

IN DOOR WORK.

[This department does not suit us this month—there are too few practical hints and suggestions. The "Fairs" have kept us busy. But while we can and shall do more, we want the *help* of our fair readers. Almost every one of them could and would give at least one useful hint to any sister housekeeper, if she met her for an afternoon's chat. If we could send an invisible reporter, wherever two or more good housekeepers meet, we are quite sure he would always bring back some suggestion that would be new to thousands of others. But such a reporter is out of the question, and we want to ask of our readers, that whenever any one gets a new idea in any department of household labor, it be noted down and forwarded to the *Agriculturist*."

A Moss Vase.

The cut below represents a vase for holding flowers, which is of novel construction, and so simple that any one can make it. The frame, as seen on the left, is made of two pieces of board, the lower one ten inches or a foot square, the other an inch smaller, with an upright square or round stick fastened to the middle. It will be firmer if let into a hole in the base. For the top, take a common straw hat with rather a low crown, and sew a piece of wire around the rim to stiffen it. Another piece may also be sewed around the top of the crown, on the inside. Cover the wire and edge of the rim with green ribbon, which may be put on with gum. Set the hat, crown downward, on the upright stick, so that it will be supported by its center. Lay a small piece of leather in the crown over the stick, and fasten the hat down with small nails driven through the leather. This completes the frame. The whole is then to be covered with lichens, (the *flat* moss that grows on trees, rocks, etc.) These are fastened on with glue. Mosses

cannot be fastened as well as lichens, but a trimming of them fastened around the edge of the rim would look tasteful. The lichens are of different colors, green, red, and yellow, and may be arranged to look very neat. We have seen several specimens like the above. The idea came originally, we believe, from a valuable little work on "Leaf and Flower Pictures," already noticed.

THE LITTLE HOUSEKEEPER.

Here is a pretty picture, from a painting by the French artist, E. FRERE, which has pleased us exceedingly, and we gladly share that pleasure with our readers, by re-engraving the sketch for these columns. The utensils are slightly different from those in use here. A lady friend of ours, who has traveled much in France and Germany, recently described to us the household arrangements of those countries, picturing almost precisely such a room as the one we see in the engraving. There are the stove, the universal big *marmite* or soup kettle, the water-jug, basin, milk-can, lantern, vegetable-basket, etc., just in the order we should find them in half the houses abroad. The attitude of the little maiden is life-like. Note her childish gravity and importance as she is wholly absorbed in skimming the soup. Many a housekeeper will be forcibly reminded of her first essays in the kitchen.

In addition to the interest awakened by the picture as a work of art, and the associations it recalls, it suggests a subject so often discussed in these columns, and so ably treated by our correspondents, that we hardly need to add a word here; viz.: the education of girls in a knowledge of household duties, and this, too, early in life. The French people are in advance of us in this, for though perhaps more devoted to dress and fashionable amusement than any other people, there are proportionally fewer ladies there than elsewhere, who are not practically acquainted with all kinds of household labor. Here we make "dolls" of our daughters, from the cradle up, little ladies we call them, and they too often continue "dolls" through life—fragile dolls that are broken ("broken down") by the slightest collision they may chance to meet with. If not spoiled by wrong notions, little girls usually desire to learn to do "as mother does." We always love to see them play housekeeping, and it is wise to early cultivate this propensity. The mother should more frequently notice, and take an interest in these childish sports, and at the earliest possible moment entrust the little one with some responsibility. If even to the six-year-old damsel there be allotted the care of a room, or other labor, however light, she will feel her responsibility and more rapidly acquire knowledge which will be practical, and never be forgotten, whatever her future station in life.

How to Paper a Room.

Unless wall paper is put on neatly, a room will not look well, however beautiful the pattern of the paper may be. It should lie perfectly smooth, the joints should be closed, and the pattern be exactly matched where the pieces meet. A professional paper-hanger, whom we have to-day watched pretty closely while papering one of our office rooms, proceeded as follows: (This room is divided from another by a wooden or plank partition.) To prevent the breaking of the paper by the shrinking of the wood, a coarse cheap unbleached muslin was nailed on, nails being used only at the joinings of the cloth. The ceiling which is of planed boards, was also prepared for paper by nailing on muslin. Each roll of paper was first trimmed, by cutting off the superfluous paper from one edge, leaving the other to receive the piece to be lapped over. The ceiling was papered first. Enough of the paper to cover it was

cut of the right length, allowing enough to have about two inches to turn down around the sides of the room. Care was taken to cut these pieces so that they would match when put up. The pieces were then all laid together upon a table, spread out one over the other, with the figured side down. The paste was made of flour and water with a piece of alum the size of a walnut to each pailful. After boiling, it was thin enough to spread very easily. Paste for this purpose is usually made too thick or stiff. A wide brush like a whitewash brush, but without a handle, was used for spreading the paste. About two thirds the length of the top piece was covered evenly with paste, and doubled together, except a few inches of the end. Then the other end was treated in the same manner. The paste that run over the edge came upon the *back* of the next piece, and thus no harm was done by it. The doubling was for convenience in handling without touching the pasted side, and the ends were left not turned down, to take hold of readily, when separating the pasted sides. The operator then supported the paper on the left hand, and with the right commenced laying the edge of the paper even with the edge of the ceiling, passing the hand lightly outward at the end, and then along the length of the piece. When one end was thus fastened, the other was opened, part at a time; and put up in the same manner. A brush broom instead of a cloth was then passed over the whole to take out the wrinkles. Thus each piece was put up until the ceiling was finished. The long pieces for the sides were then cut, folded, and laid on, commencing at the top and working downward. The odd corners and pieces were put on last. Finally the border was added, and the job nicely completed. This is a simple operation to describe, but from the particulars given, any one unacquainted practically with papering, may probably derive a hint or two.

How to Do your Own Soldering.

"Bridget, get your things all ready to wash on Monday."—"The boiler leaks, mum, there's a hole in the side."—"Why didn't you tell me before?"—"I forgot it mum."—"Well, we must put off washing until Tuesday. Husband, that boiler must be sent to town on Monday."—"I can't spare any one to go, wife, the men and boys must hurry up the haying: You must put a rag into the hole. Really I wish I had learned the tinner's trade, there's so many leaks coming into the boilers, the basins, the pails, the milk pans, etc., etc. Two minute's work would stop that leak in the boiler, but I must send it half-a-dozen miles, and perhaps wait an hour or two, to have it fixed. I wish there was a good substitute for tin ware, it's so much bother."——What family has not had some such experience as the above?

When a tin-worker is near at hand, it is usually more convenient to employ him to execute the various items of soldering that occur in every family. But a large number of families live remote from a regular tin-worker. Especially is this the case with those in the newer sections of the country. Moreover, the great majority of farmers live from one to five or more miles from a tin-worker, and it is no small inconvenience to carry to the shop the boiler, the tea-kettle, the tin-pan, the wash-basin, the cups and platters, and other kitchen utensils, every time a leak occurs. The cost of mending is usually of less account than the trouble of carrying an article, waiting for it, and bringing it home, to say nothing of the inconvenience, and the loss of its use until "it can be attended to." And still further, many utensils are quickly spoiled, or thrown aside as useless, when a single drop of solder applied, would preserve them many weeks or months.

But we need not dwell on this—every housekeeper knows the trouble experienced with tinware. The remedy we would offer, is to give a few plain simple directions which will enable any person to do up at home most of these little jobs without cost, and with a fifth part of the time and trouble required to carry an article to the tinsmith. We give the following suggestions partly from experience and partly from the opportune letter of a correspondent who has furnished us with full details. (We have ourselves had not a little experience in soldering, while making galvanic batteries, electric machines, and other philosophical and chemical apparatus.) Common tin-ware is not really *tin*, but thin sheets of iron coated upon each side with a film of pure tin to protect the iron from rusting, and to give a bright clean surface. When the tin coat is worn off on either side, the iron soon rusts through, and the tin upon the opposite side is speedily broken, leaving a hole. The remedy is to melt on a bit of solder. So also where a joint occurs, or the original solder was imperfect, or has been melted or worn off, new solder must be applied.

In the absence of other convenience, it is usually practicable to scrape the surrounding surface smooth or bright, drop on a little resin ("rosum" as it is commonly called), lay on a bit of solder, and melt it with a hot iron—the heated tongs, or even a lively bright coal. A piece of "pewter" spoon, or old teapot, may be used for solder, and we have often "stopped a leak" by such simple process. But a neat job can not be made in this way, nor is it always successful.

A simple copper soldering tool, (called a "soldering iron,") and a piece of good solder, are more convenient, and are worthy a place in every country family. A good soldering copper can be bought in almost any village for a few shillings. Fig. 1, is a very convenient form for general purposes.

C, is a round piece of copper, weighing say, 1¼ lbs., and 1½ inches in diameter, with one end drawn out nearly to a point; *i*, is an iron rod; *h*, a wooden handle. One of these is readily made. The larger the size, the longer will it retain heat for work. Purchase the copper bar, *c*, costing 30 to 40 cents a pound. Have it pointed by a blacksmith, warning him not to heat it beyond a dull red; *i*, is to be inserted by cutting a screw thread on the end, and fitting it into a screw socket made in the blunt end of the copper before pointing it, and add the wooden handle by simply driving it on to the iron rod previously pointed, or by boring a gimlet hole in the wood and driving it on. The iron rod may be attached to the copper in various ways, one of which is shown in fig. 1. With no practical knowledge of blacksmithing, we have made a very good soldering iron of this kind. For heavy work, a correct form is shown in fig. 2, where the end of the copper is simply flattened out, leaving a wide edge. But the form shown by fig. 1, is sufficient for all common operations of the unexperienced.

Fig. 1.

Fig. 2.

The next thing after buying, or making, the soldering iron, is to coat the beveled end with solder. To do this, file it smooth; then heat it, not red, but just so that it will melt a piece of solder; then file it bright quickly, and immediately rub it upon a piece of solder laid on a board hollowed out a little, or better still, upon a piece of tin. Pounded resin must be placed with the solder to keep out the air which would otherwise rust the heated copper and prevent the free union of the solder. Until after a little practice, it may be necessary to heat the copper several times and file it bright where not coated, before a perfect coat will be obtained. When once coated, it will remain so, provided you never heat it to redness, which burns off the solder. If this is done by accident, it must be again coated as at first. Our first essays were made without instruction, and it was some time before we learned that to coat the copper well, it must be kept at the lowest melting heat, and be filed bright after heating; and that to preserve its coating, it must never be heated very hot.

The *soldering metal* we have usually bought; but we have made it by melting together block tin (pure tin metal) and lead, taking say about 8 ounces of lead to 6 ounces of the block tin. There are many articles of pewter and brittania ware which are of about the right composition. This composition of tin and lead melts easily and flows readily. Neither tin nor lead alone answers to solder with. It is usually better for the unskillful to buy a ready made soldering iron, and a pound or two of solder to keep on hand. The solder costs about 25 or 30 cents per lb., but a pound or two will last several years for common family use.

To mend or solder Tin Ware.—Scrape the surface to be covered or joined, clean and bright, and sprinkle on a little powdered resin. Heat the implement (*not to redness*) so that it will readily melt off the end of the rod or piece of solder. Before using, draw each side of the copper briskly over a wet cloth to wipe off ashes and any oxide (scum) on the surface of the tinned end. Then melt off some drops of solder, letting them fall upon the place to be soldered, and apply the implement, holding it on until the solder flows, and then draw it across the place to be mended, holding the vessel so that the melted metal will run in as thick a mass as may be desired at any point. Draw or lift the soldering iron off quietly, and the melted metal will flow evenly, and as it cools, leave a bright smooth surface, unless the copper has become so cool as to leave the solder not hot enough to flow readily.

Keep always in mind not to get the copper too hot. The degree of heat will very soon be learned by frequently removing the copper from the fire and holding it near the face. In heating a soldering iron, it is better to lay the shoulder or large end in the hottest part of the coals, letting the pointed or tinned end lie beyond the coals. When using a hard coal stove, we thrust the copper down through the coal, letting the pointed end stand in the grating below, where it is less apt to be burned. It must be watched or it will get red-hot in a coal fire, and spoil the tinning.

To solder Copper or Iron Surfaces.—These may be joined or mended the same as tin, by filing them bright and using resin freely; but inexperienced hands generally fail, and old tinmen find it better to apply, in addition to the resin, (and before the latter is sprinkled on) either sal ammoniac, or chloride of zinc. A lump of sal ammoniac obtained at any druggists for three or four cents, will answer every purpose and last for years. Wet this, and rub it upon the cleaned or brightened iron or copper, then sprinkle on the resin, and the soldering is then just as easy as if upon a tin surface. When a piece of tin ware is badly worn, as upon the bottom of a basin, the soldering is facilitated by rubbing on the sal ammoniac.

Instead of sal ammoniac, we have usually used chloride of zinc. This we prepare by putting into a phial or bottle a handful of bits of zinc—old

sheet zinc, scraped clean and cut up will do—and pouring upon this half a gill or a gill of muriatic acid (hydro-chloric acid) with three or four times as much water. The cork is left out until effervescence ceases. The fluid will become saturated with zinc in an hour or two, and the fluid thus obtained may stand loosely corked to keep out dust, and is always ready for use. A drop or two of this applied with a stick to wet the surface where copper or iron is to be soldered, is quite as good as sal-ammoniac. In soldering pewter, grease is applied to the surface instead of resin. Much practice and skill are required to mend brittannia or pewter successfully, owing to the fact that these articles are so nearly like solder in composition, that they melt easily, and are liable to be melted down without special care.

We have given all needful particulars, following which, any one will, with a little practice, be able to do a great deal of "tinkering," at no little aving of time, expense, and annoyance.

Hints on Cooking, etc.

Lemon Cheese Cake.

Contributed to the *Agriculturist* by Mrs. S. Wagstaff, N. T. To 1 lb. of lump sugar, pounded, add 6 eggs, leaving out two of the whites, the juice of three lemons, the rinds of two grated, and ¼ lb. of butter. Put all the ingredients into a pan, and stir them gently over a slow fire until the mixture becomes thick, and looks like honey. Line the smallest size of patty pans with puff paste, put in a teaspoonful of the mixture, and bake. The mixture will keep twelve months, in a jar covered with paper, and set in a dry place.

Soda Cake.

Nice for the tea table; by the same: Mix 1 lb. of flour, 1 lb. Zante currants, ¼ lb. sugar, ¼ lb. of butter, ¼ pint of buttermilk, a teaspoonful of carbonate of soda, spice to your taste; bake half an hour.

[The following five recipes for cakes were contributed by Lucy E. Cady, Columbia Co., N. Y. Some of them we have tested and found good.]

Lemon Cake.

To 3 cups of flour add 2 of sugar, ½ cup butter, 1 of sweet milk, 4 eggs, 1 teaspoonful soda, 2 cream tartar, 1 extract lemon.

Delicate Cake.

2½ cups flour, 1½ of sugar, ½ of butter, ½ of sour milk, the whites of three eggs, ½ teaspoonful soda. 1 extract lemon.

Sponge Cake.

2 cups flour, 1½ white sugar, 1 of sweet milk, ½ of butter, 3 eggs, 1 teaspoonful cream tartar, 1 of soda.

Caroline Cake.

2 cups flour, 2 of sugar, 1 of sweet milk, whites of 5 eggs, 3 tablespoonfuls butter, ½ teaspoonful cream tartar, ½ of soda, flavor with lemon.

Cheap Cake.

2 cups flour, 1 of sugar, 1 of sweet milk, 5 tablespoonfuls butter, 2 eggs, 1 teaspoonful cream tartar, ½ of soda.

English Plum Pudding.

By Mrs. Wagstaff. 1 lb. of sultana raisins, 1 lb. dried currants, 1 lb. suet chopped fine, 1 lb. flour, 1 lb. bread crumbs, a little pounded spice, 1 oz. candied lemon peel, orange, and citron, 1 nutmeg grated, ½ lb. sugar. Mix all together, rubbing it well with the hand; than add eight eggs well beaten, ½ pint new milk, and two wine glasses of brandy, stir it up well with a wooden spoon, be careful not to make it too wet, put it in a mold or cloth, and boil four hours; serve with wine sauce. [An English friend at our elbow says, it should be boiled six hours, then allowed to cool, and afterward, say in a day or two, boiled six hours again, using a cloth always, not a mold. His mother used to make it so at home, and he knows it was good —Ed.]

Sweet Potatoes made of Irish Potatoes.

Steam them well, and wring them in a towel to make them mealy; mash till there are no lumps left, and sweeten with good brown sugar to the taste. They are now ready to be baked, fried, or made into puddings. At least, so says *Oregon Farmer*.

Baked Egg Plant.

This vegetable is usually cut in slices, and fried in butter or lard. When cooked in this way, it absorbs too much fat to be easily digested, and can not safely be eaten by those inclined to dyspepsia. We have recently heard of the following method, by which this difficulty is avoided. Let the plants be very nearly ripe; cut them in halves, and remove part of the middle pulp. Prepare dressing as for stuffing a turkey, fill the plants; put the halves together, and bake them. This is said to make an excellent dish.

Egg Tea or Coffee.

Mrs. C. O. Brown, Calhoun Co, Mich., directs to: Beat the yolk of an egg, with 1 tablespoonful of sugar and put into it a cup of cold tea or coffee. Add ½ a cup of cold water in Summer, or boiling water in Winter. Put in cream to suit the taste. Then whip the white of the egg to a froth, and stir it in; this is nice for an invalid.

A First-rate Corn Bread.

It is hard to conceive, what, as a nation, we should do without our great staple Indian Corn, of which about a thousand million bushels, or more than *fifty thousand million pounds!!* are now annually produced in our country. What crop would take its place! As an article of food it is both healthful and nutritious, and is hardly excelled even by wheat. Yet comparatively few families make any account of it in the culinary department. The hasty-pudding or mush, poorly made, and not half boiled, the Johnny Cake (journey cake?) made essentially of meal, salt, and water, or a little milk, are the chief articles of diet prepared from corn, in three families out of four. No wonder, children grow up with a dislike of it, and in after life feel as an old gentleman remarked to us recently: "I don't want any 'Indian' in my family, I had enough of it while a boy." But this should not be so; there is an almost infinite variety of wholesome, nourishing, healthful preparations to be made of Indian corn, which are both pleasant to the taste, and economical withal. (A pound of meal usually costs less than half the price of a pound of flour, while it contains about the same amount of nutriment) We have given several recipes for the preparations referred to, some cheap, and some more expensive, and we shall give many others. Here is one, partly meal and partly flour, which we have used for a few months, and which to our taste is first-rate:

To one quart of thick sour milk, or of buttermilk, add 1½ teacupfuls of molasses; 3 cups fine meal; 3½ cups of flour; 1 teaspoonful of salt, and 2 teaspoonfuls of soda. (Sweet milk may be used as well, by adding only 1½ teaspoonfuls of soda, and 3 of cream of tartar) Stir well together; put into a basin, and steam *three* hours, than bake *one* hour. It is moist and delicious, and will keep good for several days. The steaming may be done in a regular steaming vessel, or in any kettle, by simply setting the basin upon a brick block, to support it above the boiling water—just as bread is steamed. The kettle will need to be covered, of course.

For the American Agriculturist.

About the Hair.

Every one knows, of course, that a lady's good appearance depends not a little upon the care bestowed upon the hair, and I need not say that neglecting to have the hair neatly brushed and kept in proper bounds, indicates want of taste more than almost anything else. On the contrary, the danger is, that the hair will be injured by the excessive or injudicious treatment it receives, with the hope of improving its appearance. From ill health, arising from the use of tea and coffee, and from a thousand other causes, the head is often hot and feverish, and the hair becomes harsh and dry. It will not then lie smoothly, and resort is had to oil or grease in various forms. The sale of manufactured "hair oils" is enormous, showing their extensive use. These, whatever names they may bear, are almost all made from sweet oil, or lard, perfumed with various extracts, and they yield an immense profit. But their use is in most cases positively injurious. When the body is in health, nature supplies the scalp with an abundance of oil, exactly fitted for the hair, and when not in health, no external application of artificial oil can take the place of the natural. On the contrary, these artificial hair oils, in spite of the perfumes they contain, become rancid, and do more harm than good. They clog up the natural oil ducts, the skin becomes still more dry, and scales off in the small particles, called "dandruff." Then resort is had to "hair washes," which consist chiefly of alcohol. These dissolve the dandruff, and stimulate the scalp, and at first seem to be beneficial, but in the end they only aggravate the difficulty.

There is only one application that is safe and beneficial under all circumstances, and this is *cold water*. No soap should ever be used with it, as this dissolves off the natural oil, and renders the hair dry and stiff. But pure water washes out dandruff without removing the oil, and leaves the skin cool and clean, and thus promotes the growth and health of the hair. Some persons take cold in using cold water, but this may be prevented by wiping the hair as dry as possible, using two or three towels, and then putting on a covering—a warm cap or a handkerchief tied on—until the head is nearly dry. Ladies having thick hair, complain that it does not dry out. But thorough rubbing, with a warm cloth, if need be, will generally dry it so that the heat of the head will drive off any remaining moisture.

Morning is the best time to wash the hair. At night, the system is tired and debilitated, and if one then lies down with the hair wet, the evaporation may produce a cold. The writer speaks from experience. When formerly bathing both the head and body at night, a cold was the usual consequence; but latterly, a morning bath, taken as quickly as possible, followed by a brisk rubbing with towels, is indulged one, two, or three times a week, with no resulting cold, but greatly to the promotion of health. When the hair needs anything to make it lie smooth, whether after bathing and drying it, or at other times, it is put in place with a brush dampened simply with pure water, which is quite as effectual as oil, and far neater and more healthful. Let any one try cold water on the hair, for six months, with the precautions above indicated, and they will never return to any other "hair oils," or "hair washes"—at least so thinks

One who has tried it.

How many cold, gloomy homes might be enlivened by the exercise of those small, sweet courtesies of life, so easily given, and so magical in their effects.

The Editor with his Young Readers.

During the past month we have enjoyed frequent personal chats with many of our young friends at the Exhibitions and elsewhere, and we often wish we could gather around us the hundreds of thousands of those who read these pages; for we could then talk faster and longer than when speaking by *signs*. But even this chit-chat is infinitely better than cold silence. And talking by *signs* is not so bad. Let's see, all talking is by signs. When you wish to express a thought to us, you use various ink marks, the meaning of which we all understand; and we also use these printing-ink marks to convey our thoughts to you. When we *talk* we use sound *signs*, and every one uses the same sounds or combination of them for a particular thought. The Deaf use finger signs which also represent thoughts. Telegraph operators use dot and mark signs; thus: this —.. is their character for A, or a, or *a*; —... stands for *b*; this . for *e*; this .. for *i*; this ... for *s*; etc. They also use and understand the sounds made by the instrument when it is putting marks like these on paper. Birds and other animals use signs of their own. Sometimes these signs are audible—we can hear them—and sometimes they are made with the eyes or limbs. Did you ever watch two birds talking together? If not, try it, and you will be interested.

STINGY FOLKS—SAVING MONEY.

Are you acquainted with any stingy people? Perhaps so, but it may be you have not judged rightly about them. A person is not stingy, merely because he does not give to every one who asks him. We know rich men who are really liberal, giving for good objects all they can afford, but who have the name of being covetous, miserly, and stingy, merely because they are careful in saving, and choose to give according to their own judgment, but they do give liberally. We have known boys call a playfellow stingy, because he did not spend his money foolishly for candy and other nice things to treat his companions. There are misers, but not often among boys. *Their* fault usually is carelessness with money. It seems to burn in their pockets, and make them unhappy until expended. The pennies which most boys receive from time to time, if saved, would amount to quite a handsome sum by the time of reaching manhood, often, enough to give them a capital to start in business. This picture represents the business room of

A SAVINGS BANK,

where people may lay by the money they wish to keep. The officers of the bank receive the small sums brought in, put them together and lend them to persons who pay interest for their use. Within a few years Savings Banks have been established for boys and girls, and thousands of dollars have been kept for them. The little fellow in the picture feels quite proud, no doubt, to have "business at the bank." He will have much more pleasure in looking at his bank book in which the clerk gives him credit, than he would in thinking what a fine orange he ate a few days ago, if his money had been spent in that way.

A boy who thus forms the habit of saving, starts right to become a rich man. It is not necessary to put the money in such a bank. A pine box or an earthen jug will keep it just as well, *if the cover be kept down*—though in the latter case it will of course draw no interest.

We do not say put every cent in the box or bank. That would deprive you of the pleasure of doing good with some of the money; and there is no way in which it can bring so much enjoyment as this. The best way we know of is to work by rule—say devote one tenth of all you receive to benevolent objects, one half to the savings box, and spend the rest in the very best manner possible.

CEYLON CROWS AND THE DOG.

ABOUT THE PICTURE OF THE CROWS AND DOG.

This picture is interesting. You will easily understand it. The story which it illustrates, is a pretty hard one to believe, but it is said to be a literal truth, and if so, we shall readily believe the assertion that the crows in Ceylon are very cunning and sensible, more so than our own, which are somewhat larger, and have not quite so glossy black coats. However, we give our American crows considerable credit for "cuteness," and they can talk in their own way too. We once thought the crows did more harm than good (we think differently *now*), and we often tried to trap and shoot them. Sometimes we could catch one, by covering a steel trap with chaff, near a dead animal, but they almost always seemed to understand our game. Anybody who has tried to shoot crows, knows how annoying it is to cautiously creep around behind trees or bushes, and get just ready to take aim at a flock, when an old sentinel crow perched on a tree top will ring out his "caw! caw! caw!"—and away go your intended victims, making the air ring with their cawing over your discomfiture. We have sometimes blazed away at them when on the wing and at a safe distance, just in return for the fun they were poking at us. The story of our picture is, that one of these Ceylon crows wanted to share a bone in possession of a dog, but the latter gave him a growling notice that he wanted it all himself. So the crow quickly called a companion, and after a little cawing together on the subject as if laying their plans, the second crow flew down and gave the dog's tail a sharp pinching. The dog of course turned round to look out for his tail, and then the first crow seized the bone and made off with it. The story don't tell us whether he divided the booty with his companion who had assisted him, but we are bound to believe he did, for we never heard of a mean act in a community of crows. They always appear to be on the best of terms. Who ever saw or heard of two crows fighting or quarreling? In this respect they are an example to other animals—including those whom Old Diogenes called "bipeds without feathers."

THE HEN AND PIG—THE CAT AND SQUIRREL.

There is a side scene in our picture worth looking at—the hen who has taken charge of a poor motherless little pig. This fact is vouched for by an English writer who owned the animals. Perhaps it is true. We know a cat that lost her kittens, and she actually adopted a young squirrel and nursed and reared it. The little fellow frisked around his foster mother and played many amusing pranks. When he became too troublesome, she would give him a sharp pat with her paw, and away he would scamper out of pussy's reach, and not return until she mewed for him, when he would run down and nestle up to her:

THE CAT AND THE HORSE.

In a livery stable in this city, there is a cat that was reared in company with a horse. When he is at home, she usually sits upon his back, and always shows great pleasure when he comes in after a drive, by rubbing against his legs and purring loudly. The horse too seems to be very fond of her, and to be pleased to have her take her accustomed place to sleep.

GATHERING CHESTNUTS.

A western artist has furnished us with original sketches of the Chestnut, the Beech, and the "Buckeye." By the way, can any of the Ohio boys tell us why the people of that State are called "Buckeyes"? Below we have a twig of the chestnut, with four plump burs, two of them cracking open, almost ready to let the ripe nuts drop rattling among the brown leaves below, there to be hunted for by the Boys and Girls, or to be quickly snapped up by the sharp-eyed active squirrel. It makes us feel young again to look at them. Back we go, twenty years and more at a bound, to the woods and fields on "Father's farm," where we have hunted, and pelted, and climbed for the treasures. There stood a famous old tree on one

side of an apple orchard on the old homestead, and many a feast of nuts and apples we have had there. And then, when nutting season was over, what good times there were around the old fashioned hearth where the fire was roaring, and we were popping chestnuts in the hot ashes, and telling stories. On one such evening we had quite an *adventure;* we took the basket to go down cellar for some apples to have a good time with brothers and sisters. Just as we reached the apple bin, the candle dropped, and it was as dark as a pocket. The basket was soon filled, and we started for the stairs, but somehow or other got "turned around" and actually *lost*, down cellar. To have called for a guide, would have made us the joke of the evening, so round we went groping and feeling for some familiar object by which to steer to the stairs.

Bump went our head against a low beam, frightening a rat some—and us more—he scampered, and we rubbed our head. Next we discovered a barrel, and exploring it, plush! went our hand into the soft soap, and immediately after into a pan of milk. That gave a land mark, and we stumbled along to the stairs, and reached home safely, after an absence of some fifteen minutes.

WHAT IMAGINATION WILL DO.

While looking over what we wrote for the boys and girls in September, about "building castles," and the freaks of imagination, and the misery it often leads us into, we are reminded of several incidents illustrating the power of this faculty of the mind. A French criminal, condemned to death, was given to the medical men to experiment with, on condition they saved his life. They informed him that he was to be bled to death. They brought in large vessels as if to catch the blood, showed their instruments, then bandaged his eyes, tied up his arm, and pricked it as if lancing a vein. A stream of warm water was poured upon his arm to drop off into the basin, and sound like running blood. As the experiment went on, they felt of his pulse, talked about the large amount of blood drawn, and spoke to each other of his being nearly gone. The result was, the man actually died, though not an ounce of blood was drawn.—In another case a deserter from the army was condemned to be shot, but afterward reprieved. Wishing to punish him somewhat, the officers did not inform him of his pardon, but at the previously appointed time, led him out before the drawn up file of armed men, bandaged his eyes, made him kneel down, and then had the soldiers fire over his head. Though entirely untouched the man fell dead. So it is, we imagine a thousand evils, and suffer as much as if they were realities. Don't let this faculty of the mind run away with you, and lead you into wild vagaries....Don't cultivate it unduly by reading novels or works of imagination.

MORE SCARED THAN HURT.

Appropos to the above we will relate a circumstance that came under our own observation. A man was cutting wood in the forest; his ax glanced upon his foot making a hideous gash. He saw the gaping wound, quickly bound it up with his handkerchief, dragged himself to the sleigh, and went home almost fainting with fear. Reaching the house, he called for help, was carried in and placed upon a bed, where he lay groaning as if in extreme pain. While the physician was sent for, his wife removed the boot. The gash was indeed a severe one, but only to his boot and stocking, which being thus cut, exposed to his frightened view some red flannel in which he had wrapped his feet that morning to keep them warm, and which he had thus mistaken for his own flesh. His groaning was soon changed into laughter, in which all present joined very heartily.

ABOUT THE PROBLEMS.

Correct answers to Rebus 42 were received—too late to be noticed in the Oct. No.—from John E. Zeublin, J. M. Bradbury, (Thank you for your efforts to get subscribers), Rena S. Tibbals, (Rebus sent is good for a beginner.) Fidelia R. Lord, E. F. Pearsall, and Ann Walton.

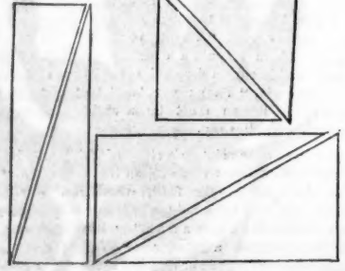


Fig. 1.

No. 44. To arrange the pieces in Fig. 1 to form a square. *Answered*, as in Fig. 2, by: Harry La Fetra, (Your pleasant letter is on file for attention), W. Rowena Noble. The following have found two other ways of placing the pieces in a square, which we have not room to illustrate: Caspar W. Dean, Cornelius Van Houten, Joannah Cremer, S. H. Ward, Jno. H. Thompson, (The puzzles sent are very neat), Edward W. Marsh, C. H. Clark, Mary Campbell, William D. Avery, Jonathan E. Jones, John Smith, Mary Wilson, John E. Schluter.

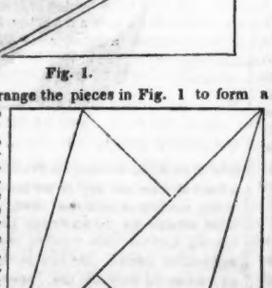


Fig. 2.

NEW PROBLEMS.—No. 45. *Illustrated Rebus.* This is very difficult, and has puzzled old heads to whom we have

showed it. There will be all the more credit in reading it. It is a line of poetry.

AGRICULTURAL ENIGMA.

I am composed of 16 letters:
My 10, 12, 14, 6, 8, is produced on every farm.
My 6, 9, 15, and 12, 11, 3, 4, is necessary to the growth of all vegetables.
My 1, 2, 7, 16, 8, 5, is the product of the dairy.
My 2, 5, 15, is a bird found on almost every farm.
My 13, 11, 4, often holds the farmer's dinner.
My whole is an imported plant frequently spoken of in the *American Agriculturist*. AUNT SUE.

Grandmother with the Little Girls.

REPORTED BY COUSIN MARY.

DEAR MR. EDITOR:—Grandmother has just returned after being away on a visit for several weeks, and you may be sure we were all glad to see her again. We had a great many things to tell her about ourselves and our companions. While we were rattling away two or three at a time, she began to laugh, and upon our asking the cause, she gave us the following pleasant talk.

ABOUT THE TONGUE AND SO FORTH.

"I love to hear your cheerful voices again my dear girls; they are pleasanter to me than the prettiest notes of the robin or the canary, but you are all so eager to be heard and all have so much to say, that it sounds more like the twittering of a flock of birds, than anything else. If you talk just to hear yourselves, I suppose it will do very well, but if you wish *me* to hear, it will be necessary for only one to speak at a time. You haven't learned how to keep your tongues in proper bounds yet. Indeed I don't know many people who have. I don't understand anatomy, but I think the nerves and muscles that move the tongue must be connected with every part of the brains, for the very minute anything pops into the head it seems to set the tongue going, and it takes a long schooling to control it.

I don't believe what some folks say, that little girls should be seen and not heard. I wouldn't have them dumb for anything: but I want them to know *how* to talk, and *when* to be silent.

I wish I could invent something to put in people's mouths, like what I saw fastened on to a water pipe the other day. They called it a filter. The water was quite muddy, but when it passed through the filter it came out as clear as crystal. Oh! if we could only strain out all the naughty, passionate, careless, silly and unkind words from conversation, what a pleasure it would be to listen. I'm afraid some people would not have much to say, and I'm quite sure the filter would want cleansing pretty often.

It's curious how people's tongues will run when they talk about others. I've been in company sometimes, and all was quiet and dull, nobody knowing what to say, until a remark was made about some absent person, and then, my! what a rattling. It made me think of dogs hunting rabbits. They run round among the bushes very quietly until one of them spies the game and gives a bark, and then they all seem to try out-bark each other. If you will try my dear girls, to see how much good you can say about your companions, you will find it far pleasanter. One secret of happiness is to look on the bright side of things, and every body has a bright side. How foolish it would be to walk through a garden and look only at the weeds, leaving the beautiful roses and pinks and other flowers unnoticed. There a good many weeds among people in this world, but for my part I prefer looking for and talking about the flowers. Speaking well of others will also make us many friends, while tattlers and gossips are always getting into difficulty. But I see you begin to think I have talked enough, and you would like a chance yourselves, so I'll keep what more I have on this subject until another time.

A Premium for Boys and Girls.

Many premiums have hitherto been given to our younger readers for getting new subscribers, and nothing has given us more pleasure than to pack up and send off to some distant boy or girl one of those splendid Unabridged Webster's Dictionaries. This book is more attractive and useful than ever, as it has recently been still further enlarged by the addition of many hundreds of illustrations, engravings, tables of synonyms (words of similar meaning) besides many thousands of new words. In its old or new form it is a prize worth having, and we shall be glad to distribute hundreds of copies the coming Winter, particularly to our young friends. Many of them can with a little effort get 45 subscribers at 50 cents each, or 25 at $1 each, which will secure the Dictionary.

OUR EXPOSURE OF HUMBUGS.—A physician, who stands among the first in his profession, and who edits a leading Medical Journal, writes: "....Allow me to thank the *Agriculturist* for exposing the cheats of advertising humbugs. So far as they are in the medical line, they do not harm the medical profession; on the contrary, these advertised quack medicines really make more work for physicians;—and yet we can not but regret that so many persons waste in the use of such nostrums all that time in which a cure is possible by an intelligent physician. But the "laity" do not believe us when we tell them such homely truths, because they think (that we think) our craft is in danger. *You* they will hear—*perhaps*

PROFESSIONAL POMPOSITY ON BOTH SIDES.—

English Dentist—"Well mariner, what dental organ do you wish to have extracted? Is it a molar or incisor?

Sailor (sharply and short)—I want you to pull that marline-spike sticking out in the upper tier on the larboard side. Bear-a-hand, you swab, for it is nipping my jaw like a lobster.

Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, together with Gleanings of various kinds from various sources.*

Business Questions.—A great number of these in regard to Premiums, Seeds, extra numbers, etc., will be found answered in sundry business notes on pages 348, 349, and 352 of this number, to which please refer.

Behind Time.—An unusual number of communications on various topics have come in since the preceding pages were provided for, and planned out.

Millet.—J. E. Hall, Westchester Co, N. Y. The seed stalk you sent is evidently a species of millet, but what kind we cannot quite determine without seeing the ripened grain. We judge it will make a good fodder, if cured as hay.

Oil for Harness.—J. D. Bristeau, Dubuque Co., Io. Neat's foot oil is the best application that we know of for keeping harness pliable. The leather should be washed clean and left well dampened before putting on the oil. This oil is obtained by boiling feet of cattle.

Planting Seeds of Forest Trees.—H. A. B. Douglas Co., Nebraska. The seeds of most forest trees,

including walnut, chestnut, butternut, beech, oak, locust, etc., should be sown in the Fall before they have become dry and hard. By putting in boxes of earth they may be kept until early Spring, and then planted or sown. We advise raising most of these in nursery rows, and then transplant where they are to grow permanently.

Moving Bearing Pear Trees.—R. Sewell, Baltimore Co., Md. Your Seckel and other pear trees in bearing condition, may be transplanted safely *if* done with sufficient care. Where the ground freezes in Winter, it would be better to remove them at that season, taking up a large mass of frozen earth without disturbing the roots. Ordinarily, small trees suffer removal less, and overtake in growth those transplanted when of a larger size.

Michigan Seedling Grapes.—Mrs. E. F. Haskell, Monroe Co., Mich. The lot of Grapes forwarded came to hand, the Haskell's Seedling rather over ripe, somewhat foxy and too much pulp for a fine grape. The "Peninsular," with less pulp, more juice of a vinous flavor, though somewhat acid, suits us better. The "Michigan Seedling" to our taste appears to be better than either of the others, although not fully ripe. Its large clusters and sweeter berry are also in its favor. They may also improve as the vines attain age. The specimens were all rather too much jammed, a trifle soured, which prevented a fair estimate of their intrinsic as well as relative merits.

How Sparkling Wine is Obtained.—S. F., Mahoney Plain, Pa. Sparkling wine if pure, owes its peculiar property to the kind of fruit used in the manufacture. Those who manufacture wines from whiskey (most wine so called is thus made) have, we suppose, various drugs which will impart the desired sparkle, but they are secrets known to themselves, and will remain so, for any thing we shall publish. The less that is known of such arts the better.

"Some Onions."—Phineas Mahan, of Philadelphia, presented us this morning, (Sept. 23,) with a white onion rather hard to "beet." It weighs *two pounds*, measures 15½ inches round, and set upright, stands six inches high, and is nearly a globe in shape. He has a larger one, but not quite so perfectly globular. He brought two dozen of these from Southampton, (England,) where they were just landing from Portugal. We have always known that Portugal was great on onion raising, but this is the best occular evidence we have had of what they raise to send abroad as an ordinary market product, for these onions are a common article of sale in London grocery stores. Their flavor is said to be as superior as their size, but we must take this on hearsay, as our specimen must be saved for seed. It can be seen at our office for a month or two.

Cultivation of Mushrooms.—M. R. W. Chagrin Falls, O. Full directions for raising Mushrooms are given in the November *Agriculturist*, Vol. XVI.

Why make Compost?—J. Pott, Fulton Co., Pa, The benefit attained by composting leaf-mold, tan-bark, lime, etc., is that the ingredients are brought into closer contact, and act upon each other more readily than if each article was applied to the soil separately.

Use for Undrained Swamps.—W. H. Nelson, C. West. Cranberries are adapted to undrained swamplands. "Huckleberries" do better on upland.

Fever and Ague.—E. P. Riley, Morgan Co., O. You are probably right in supposing the cause of this disease in your family to be the decaying vegetable matter in the cellar. Any decaying vegetable matter sends off a malaria, or poisonous exhalation, which, when received through the lungs, may cause disease, usually fevers, especially if the general health be not robust.

Description of Breeds of Cattle.—W. L. Adams, Clark Co., Ill. A series of articles with full description of the various noted breeds of cattle, extending through six numbers, was published in the *Agriculturist* last year, 1858, Vol. XVII.

Grubs in the backs of Cattle.—John Wilson, Clarion Co., Pa., writes that rubbing the backs of cattle with a strong brine of salt and water will effectually kill the grubs. It would probably be well to squeeze them out even if killed, as they might otherwise cause unpleasant sores.

To Exterminate Fleas.—J. W. Alder, Prince William Co, Va. These can be expelled from rooms, and from clothing by sprinkling with a little oil of wormwood. The sheds or pens where they breed, should be thoroughly cleansed, all loose dirt, chips, and rubbish removed, and a good coat of whitewash applied. A quantity of tansy and wormwood scattered about might aid in driving them away.

To Get Rid of Weevil.—C. J. Thomas, Fulton Co., Pa.—The insect, (*Calandria Granaria*) described in the August *Agriculturist*, page 240, may be killed by kiln drying the grain. Most of them may also be expelled by running the grain through a fanning mill. No grain should be stored for several years in buildings infested by them, and thus they will be starved out.

Silk Worms for Europe.—A disease among the Silk Worms of Europe and Asia, seriously threatens the prosperity of the Silk manufactories, and has advanced the price of Silks materially. Unsuccessful efforts have been made to get healthy worms in Turkey, in Asia, in Persia, India, and China, and attention is now turned to this country. Enquiries from abroad have been addressed to this office, and we shall be thankful for any information, as to where healthy worms can be obtained of choice varieties, the quantity, price, etc.

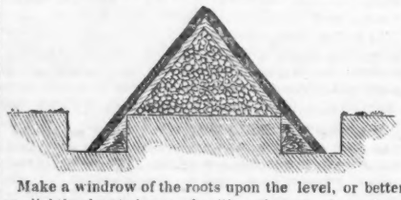
Italian Bees.—Considerable has been written within a few years past in regard to these bees. Their practical value in this country is now in a fair way to be tested. In the steamship NEW-YORK, which landed here Sept. 22d, 14 swarms were received direct from Europe. Of these, 6 swarms were brought by Phineas Mahan, of Philadelphia, on his own account. He started with 10 swarms, but lost 4 by the rough weather on the ocean. The other 8 swarms were imported by Samuel Wayne, of York, Pa., on account of himself, and L. L. Langstroth, Richard Colvin, R. C. Otis, and one or two others. We are glad to note this enterprise, and shall watch the result with interest. The design, we believe, is, to raise queens as rapidly as possible, and introduce them into native swarms.

Ferrets.—J. Flanagan, Cumberland Co., N. J., and others. We know of none in market. Parties raising them for sale should advertise the fact.

Are Lead Water Pipes Poisonous?—E. B. Good, York Co., Pa. Water in contact with lead will dissolve and hold in solution the oxide (rust) of the metal, which is poisonous. Where the water is constantly running through the pipe, the quantity taken up is too small to produce serious effects, but where the water is allowed to stand some length of time in the pipe there is danger of its becoming charged with the poison to a dangerous degree. Whenever drinking water passes through lead pipes, it is always well to draw of what has been standing in the whole length of pipe, before catching any for use.

How Much Capital to Commence Farming.—To Young Farmer, New-York City. Much depends upon the location. This will of course determine the amount necessary to expend for land. For properly stocking a farm of 100 acres, with plenty of animals, and improved implements, from $1000 to $1500 or more will be needed for a beginning. The value of the stock and implements upon a well conducted farm of this size, in full operation, will range all the way from $1000 to $3000.

Keeping Turnips.—J. Sawyer, Mahaska Co. Iowa. Where there is no cellar for storing roots they can be kept in good condition by burying them with earth as shown in the cut. It is difficult to take them out during the Winter, except when the ground is not frozen.



Make a windrow of the roots upon the level, or better on slightly elevated ground, piling them up to a sharp point at the top. Cover with a few inches of straw and a foot of earth, taking the soil from each side of the heap leaving a sort of trench to carry off water. Dry or sandy soil is best.

Cubic Contents of a Tun of Hay.—The size of a tun of hay will vary much with the variety of grass and the condition as to being pressed, etc. A tun of clover hay may be estimated at from 300 to 325 cubic feet, say a load 13 feet long, 5 feet wide, and 4½ to 5 feet high. A tun of hay from the meadow, will average about 270 cubic feet, say 13 feet long, 5 feet wide, and 4 feet 3 inches high. If taken from a mow or stack which is well settled, about 230 cubic feet, or say 13 feet long, 4½ feet wide, and 4 feet high, will make a tun.

Cooke's Sugar Evaporator.—This apparatus which is described and illustrated on page 205 of this Vol. (July No.), we have recently seen in operation, and have formed a high estimation of its value, not merely for making sugar from the chinese sugar cane, for which it was originally contrived, but especially for manufacturing maple sugar, as well as that from the common Southern cane. Every person making 200 or 300 lbs. of maple sugar annually, will do well to look into its merits.

The New American Cyclopædia.—We have already referred to this magnificent work, now being published by D. Appleton & Co., of this city. We have before us Vol. VII, which contains 792 2-column quarto-pages, and extends down the alphabet from EDW to FUE, embracing 1413 different topics, which average nearly a whole column each. The more important subjects are treated at length. There is no conceivable topic from Edw. to Fue., which is not here discussed as fully as most persons would care to find it. From these notes upon a single volume, the reader can form an idea of what will be embraced in the entire 15 volumes. The work is furnished at $3 per volume. (It will be found offered in our premium list. See page 348.)

Monthly Strawberries. E. E. Low, Providence Co., R. I. There are varieties of Strawberries bearing monthly, but they are of little value, as other fruits are abundant and preferable, out of the regular Strawberry season.

Super-phosphate Manures.—These are industriously pushed upon farmers by means of specious names, false statements, ingenious theories, and the teachings of so-called agricultural papers in the interest of manufacturers. We do not speak at random when we advise cultivators to let them alone, unless they have money to throw away. There may be, now and then, and doubtless is, a good article made from *unburned* bones, but a super-phosphate, "nitrogenized" or un-nitrogenized, which is worth half the price asked for it, is so rare a thing, that a safer rule is to avoid them all. Certain it is that some of those most puffed, and most widely advertised, are not worth ten dollars a tun, though sold at $35 to $45 or $50. We have yet to hear of a dozen men who have not been satisfied with one or two trials. But new victims annually come forward to fill the purses of the manufacturers.

Prince Albert Potatoes.—T. S. Clarkson, of Dutchess Co., N. Y., sends us four specimens, which are 7½ inches long, and average 15 ounces. We noticed at the Conn. State Fair a bushel of similar size. They shame our own crop, which this year took pattern after bantam's eggs, few being equal to hens' eggs. We have formerly considered them as among the best, but our own experience this year, and that of some acquaintances is rather against them. Others speak of them in the highest terms. The "*Peach blows*" have rotted badly the present season in our vicinity, as well as in some other sections of the country.

Keep on Trying.—T. H. B. H., Ottawa Co. Mich., may succeed in writing a very acceptable piece by continued practice. It will require many trials, and many disappointments may be experienced before finding any thing "in print," but it can be done in time. Select some plant or process in cultivation, for a topic, observe it carefully, find something new about it, and when you succeed, all readers will be glad to hear from you.

Brown informs the Boston *Post*, that of twenty-three men whom he helped to a cigar-light, or loaned a newspaper, twenty said "Thank you, sir." Of nineteen women to whom he paid a courtesy—such as giving up his seat—picking up a dropped veil, shawl, or the like, only seven said, "Thank you," and two of those were "furriners." Brown must be a crabbed disappointed bachelor—the ladies say.

A man was once relating a story of being on a locomotive that struck a cow standing on the track, and threw her several rods into the field, where she lit squarely upon her feet, with her head towards the train, and strange to tell, "she wasn't hurt a mite." "But didn't she look scared!" inquired a listener. "Well, I don't know whether she was scared or not, but *she looked a good deal discouraged*."

"Many hands make light work," said a farmer as he was raking hay at the head of half a dozen "hands." "Then father," said his boy who was tugging away to keep up, "suppose you come and rake behind."

A priest said to a peasant whom he thought rude. "You are better fed than taught." "Shud think I was," replied the clodhopper, "as I feeds myself and you teaches me."

SCRATCHED OUT.—A man asked to be excused from duty on a jury, without giving his reasons; but under a semi-compulsion from the judge, stated that he had the itch. The judge in a solemn and impressive tone exclaimed: "Clerk, *scratch* that man out!"

What word is that which, if you take away the first letter, all will still remain?

The best way to curb a wild young man is to bridle (*bridal*) him.

State Agricultural Exhibitions of Pennsylvania, New-York, and Connecticut.

We were able to snatch a day or two from pressing office business to attend each of the above Exhibitions this year, and were well repaid for the time spent. All three may be reported as the most successful ever held in the respective States—successful not only in money receipts, but also in the extent and value of the various productions exhibited.

The Show at Philadelphia, was far ahead of the previous one held at the same place. The fast-horse track was not this year the *only* point of interest, but we noticed that there was a greatly increased attention on the part of visitors to an examination of the animals, implements, and other results of labor and skill, and of course more individual profit was derived.

The N. Y. State Exhibition we think has never been excelled on this continent, in the large well arranged assortment of live stock, and the products of agricultural, horticultural, and mechanical labor. In short, it was all that could be expected. The receipts this year were larger by some $3000 than in any previous year. If we were in Col. B. P. Jonhson's place, we should be tempted to resign, lest so proud a position should never be reached again. Of course the Col. can not be spared from his useful field of labor; too much of the success of the past Exhibitions has been due to his untiring zeal in behalf of the Agricultural Society of the Empire State.

The Connecticut Exhibition was likewise a good one. The attention to the horse-track was rather marked for the dwellers in the "land of steady habits"; but aside from this, the show was excellent in nearly every department, and we were glad to observe a large attendance of those who came to learn as well as to see, and who did learn. We congratulate the indefatigable Secretary, Henry A. Dyer, Esq., who has labored night and day in the enterprise, on a success this year which is likely to stop the mouths of certain croakers who have done all possible to retard the success of this important Society. The Society may, this year, at least, feel a little independent of those who would, from parsimoniousness, or political demagogism, withhold the countenance and support of the State government from the most important organization in the State.

Market Review, Weather Notes, &c.

AMERICAN AGRICULTURIST OFFICE,
NEW YORK, Wednesday Evening, Oct. 19, 1859.

We are glad to announce material, though partly unexpected improvement in prices of BREADSTUFFS during a month past, and especially during the last week or two, though this improvement is not so gratifying as it would be, had it not been brought about by diminished receipts, owing in part to breaks in the Erie Canal. These breaks have been repaired and boats are moving Eastward with more radidity, and dealers are looking for larger supplies, and a consequent lower range of prices. This expectation produces a dullness in the market the present week. Most sales have been to the Home trade; but there has also been a fair inquiring shipment to Great Britain, chiefly of "Extra State" brands. Foreign prices have ranged too low for an active export demand. The table of prices below, indicates the rise in the market value of flour during the month.—Of WHEAT and CORN the supplies are unusually small, and there are no large lots immediately available....RYE and OATS are also rather sparingly offered in this market; the demand, however, is not urgent or active....BARLEY is plentiful and dull of sale with a downward tendency in prices....COTTON has been in limited demand, and declined ¼ cent per lb.....PROVISIONS have been freely offered and purchased....Hog products are dearer than they were a month ago....BEEF is cheaper....BUTTER and CHEESE have advanced. ....AN active inquiry has prevailed for HAY, at full rates, as well as for HOPS and WOOL, at improved prices ... RICE has been in fair demand....SEEDS have been moderately sought after, but at reduced prices....TOBACCO has attracted less attention....HEMP has been quite dull. The transactions in most other kinds of Produce have been of average magnitude, with no very noticeable alteration in prices.

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
26 bus. days *this* mon.,	410,270	513,128	251,924	37,961	65,414	357,700
27 bus. days *last* mon.,	252,724	289,316	320,008	20,180	65,060	346,509
SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	
26 business days *this* month,	428,245	613,850	400,250	66,100	74,600	
27 business days *last* mon,	366,160	343,850	576,400	29,500	89,100	

Breadstuffs exported from N. Y., from Jan. 1 to Oct. 12.

	1858.	1859.
Wheat Flour, bbls.	1,164,744	567,918
Rye Flour, bbls.	5,484	4,630
Corn Meal, bbls.	52,953	63,711
Wheat, bush.	3,037,827	38 761
Corn, bush.	1,411,044	170,118
Rye, bush.	12,487	

The following are the EXPORTS of the principal kinds of BREADSTUFFS, from the Atlantic ports of the United States, since Sept. 1:

TO GREAT BRITAIN AND IRELAND.

From	*To date.*	*Flour, bbls.*	*Wheat, bush.*	*Corn bush.*
New-York,	Oct. 7, '59..	11,425	....	....
New-Orleans	Sept. 24, '59..	....	....	....
Philadelphia	Sept. 28, '59..	815	2,900	....
Baltimore	Sept. 29, '59..	....	....	....
Boston	Sept. 29, '59..	661	....	....
Other Ports	Sept. 23, '59..	....	....	....
Total from Sept. 1, '59..		12,901	2,900	....
To about same period, 1858..		36,326	117,105	86,105
To about same period, 1857..		55,580	906,964	241,551
To about same period, 1856..		53,593	2,603,244	1,111,721

CURRENT WHOLESALE PRICES.

	Sept. 19.	Oct. 19.
FLOUR—Superf to Extra State	$4 20 @ 4 65	$4 65 @ 4 95
Common Western	4 20 @ 4 55	4 70 @ 4 90
Extra Western	4 50 @ 8 50	4 85 @ 8 50
Fancy to Extra Genesee	4 90 @ 7 50	4 95 @ 7 25
Super. to Extra Southern	5 00 @ 7 00	5 40 @ 7 25
RYE FLOUR—Fine and Super.	3 70 @ 4 30	3 70 @ 4 40
CORN MEAL	3 85 @ 4 15	4 05 @ 4 35
WHEAT—Canada White	1 10 @ 1 25	1 25 @ 1 27
Western White	1 10 @ 1 30	1 27½@ 1 42½
Southern White	1 20 @ 1 40	1 25 @ 1 45
All kinds of Red	75 @ 1 18	93 @ 1 28
CORN—Yellow	92 @ 96	98 @ 1 00
White	92 @ 95½	98 @ 1 00
Mixed	92 @ 93	98 @ 1 00
OATS—Western	39 @ 42	43 @ 44
State	38 @ 42	42 @ 43½
Southern	32 @ 37	37 @ 41
RYE	81 @ 83	88 @ 90
BARLEY	60 @ 85	75 @ 83
White Beans	80 @ 87½	75 @ 82½
HAY, in bales, per 100 lbs	60 @ 90	65 @ 90
COTTON—Middlings, per lb	11¾@ 12	11¾@ 11½
RICE, per 100 lbs	2 87 @ 4 00	3 00 @ 4 25
HOPS, crop of 1859 per lb	11 @ 15	12 @ 18
PORK—Mess. per bbl	15 87 @16 00	15 12½@15 25
Prime, old, per bbl	10 80 @10 90	10 68 @10 75
BEEF—Repacked Mess	7 50 @ 9 50	6 00 @ 8 50
Country mess	6 00 @ 7 00	5 00 @ 5 50
HOGS, Dressed corn, per lb	7¼@ 8¼	7¾@ 8¼
Lard, in bbls. per lb	10½@ 11¾	11 @ 11½
BUTTER—Western, per lb	12 @ 16	12 @ 18
State, per lb	14 @ 20	15 @ 21
CHEESE, per lb	6 @ 9¼	7½@ 10½
EGGS—Fresh, per dozen	15 @ 16½	15 @ 18
POULTRY—Fowls, per lb	11 @ 14	13 @ 14
Turkeys, per lb	14 @ 16	13 @ 16
Venison, per lb		12 @ 13
FEATHERS, Live Geese per lb.	45 @ 55	46 @ 54
SEED—Clover, per lb	8¾@ 9	8¾@ 9¾
Timothy, per bushel	2 12 @ 2 62	2 25 @ 2 37½
SUGAR, Brown, per lb	5½@ 8	5¾@ 8¾
MOLASSES, New-Orleans, prgl	39 @ 42	40 @ 45
COFFEE, Rio, per lb	10½@ 12¾	10¾@ 12¾
TOBACCO—Kentucky, &c. pr lb	4¾@ 12	4¾@ 12
Seed Leaf, per lb	6 @ 25	5½@ 25
WOOL-Domestic fleece, per lb.	35 @ 55	38 @ 60
Domestic, pulled, per lb.	30 @ 50	32 @ 52
HEMP—Undr'd Amer'n pr ton	140 @150	140 @150
Dressed American, per ton	190 @210	190 @210
TALLOW, per lb.	10½@ 10¾	10¾@ 11
OIL CAKE, per ton	30 00 @37 00	30 00 @36 50
APPLES—Dried, Per lb	6 @ 7¾	6 @ 7½
Dried Peaches—pr lb. South'n	10 @ 14	11 @ 13
POTATOES—Mercers, p. bbl	1 25 @ 1 75	1 25 @ 1 75
Peach Blows, per bbl	1 50 @ 2 00	1 50 @ 1 75
Sweet, Virginia, per bbl	2 25 @	1 38 @ 1 50
Delaware, per bbl	2 00 @ 2 50	2 00 @ 2 25
Cabbages, per 100	2 50 @ 3 00	2 00 @ 4 00
Onions, Red, per bbl	1 25 @ 1 50	1 25 @ 1 50
Tomatoes, per bushel	31 @ 50	38 @ 50
Squashes, Marrow, p. bbl	88 @ 1 00	75 @ 88
Turnips, Rutabaga, per bbl	1 00 @ 1 25	75 @ 88
APPLES, Winter, per bbl	2 00 @ 2 50	2 00 @ 2 50
Common, per bbl	1 25 @ 1 75	1 00 @ 1 25
PEARS, Virginieus, per bbl		12 00 @18 00
Common, per bbl	2 50 @ 3 50	2 50 @ 4 00
Grapes, Isabella & Catawba, p. lb	10 @ 15	10 00 @15 00
Quinces, p. bbl		2 00 @ 5 00
Cranberries, per bbl		9 00 @16 00

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been more largely supplied than ever, during a month past. Receipts of BEEVES for four weeks ending Oct. 12th, 20,247—an average of 5,062 per week, or an excess of 1,386 over the weekly average of last year. At the last sales day (Oct. 12th), prices ranged at 10c.@ 10¼c. per lb., net or dressed weight, for Prime animals; 8¼c.@9¼c. for Medium; 6c.@8c. for poor to ordinary; general average of all sales, 8½c.

VEAL CALVES.—Receipts for four weeks just ended, 3,019, against 2,495 last month. Good calves sell readily at 6¼c.@7c. per lb. live weight; ordinary at 5c.@6c.; and "bobs" at $1,50@$2,50 per head—they can not be sold by weight. There is a large supply of "bobs" or "kittens" (calves but a few days old, really not fit for veal).

SHEEP AND LAMBS.—Receipts of live sheep during the last four weeks have been fair, but less than last month, and prices have advanced at least 50c. per head. Receipts for the four weeks ending Oct. 12th, 56,823 head, besides large numbers of dressed carcases. Good Sheep now command 4c.@5c. per lb. live weight. Fat lambs are worth about 5c. Store Sheep for Winter feeding are in demand at $2@$3 per head.

HOGS.—Receipts for the four weeks just ended number 29,129 against 14,958 last month. The market has been evenly supplied, and prices have varied but little. They were all sold at the last general market at 6c.@6¼c. per lb. live weight, for corn fed hogs; and 5¼c.@5¾c. for distillery fed. The demand for good hogs is very fair.

The Weather during the past four weeks has been generally mild, but rather wet, especially the first week or two. OUR DAILY NOTES condensed, read thus: *September* 20, 21, 22, rainy—23, cloudy, rain at night—24, cloudy, ground wet—25, showery—26, 27, 28, clear and fine —29, cloudy—30, clear. *October* 1, clear A. M., cloudy P. M. and rain at night—2, cloudy A. M., clear P. M.—3, 4, 5, 6, 7, clear fine weather—8, 9, cool and cloudy, rain at night—10, rain A. M., clear P. M.—11, 12, 13, clear, fine and warm—14, cloudy, light rain at night—15, 16, clear and cool—17, cloudy—18, rain A. M., clear P. M.

Business Notices.

☞ *Fifty Cents a Line of Space.*

Agricultural Publishing House.

Having purchased the entire stock and business of A. O. MOORE & CO., AGRICULTURAL PUBLISHERS AND BOOKSELLERS, (formerly C. M. Saxton & Co.,) and united the same to our business as heretofore conducted, we now offer to the public the most extensive assortment of works on AGRICULTURE, HORTICULTURE, RURAL ART, and DOMESTIC ECONOMY, that can be found in the world.

It will be our purpose to keep constantly on hand a full supply of everything in our line, and all orders and inquiries addressed to us will receive prompt attention.

Complete Catalogues of our publications, which embrace the BIOGRAPHICAL SERIES and MISCELLANEOUS WORKS, formerly published by *Miller, Orton & Co.*, will be forwarded to any address upon application.

C. M. SAXTON, BARKER & CO.,
Agricultural Publishers and Booksellers, and Publishers of "THE HORTICULTURIST," 25 Park Row, New-York.

Having disposed of my interest in the Agricultural Book business to Messrs. C. M. Saxton, Barker & Co., (my friend, Mr. C. M. Saxton, having been formerly my partner,) I can cordially commend my successors to the Agricultural public, with the assurance that the cause for which Mr. Saxton and myself have for years conjointly and separately labored, will not suffer by this transfer. A. O. MOORE.
NEW-YORK, Oct. 20, 1859.

GROVER & BAKER'S
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MINTON'S ENCAUSTIC TILES,
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PUBLIC BUILDINGS, HALLS,
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Being very hard and strong, as well as ornamental, they have been used extensively in the Capitol extension at Washington, and in many of the best houses in all parts of the country.

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suited to every style of architecture, and recommended in Downing's work on Country Houses, and by architects generally. Also, VITRIFIED DRAIN PIPE, of all sizes, from 2 to 18 inches in diameter, for conducting water. For sale by MILLER & COATES,
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PATENT OFFICES.

A pamphlet of instruction,
"HOW TO SECURE LETTERS PATENT,"
for new Inventions, carefully prepared by the Editor of the SCIENTIFIC AMERICAN, furnished free on application to
MUNN & CO.,
Solicitors of American and European Patents,
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Onion Culture.

PAMPHLET CONTAINING SEVENTEEN ESSAYS BY PRACTICAL GROWERS.

This valuable work contains, in addition to the full, practical directions for Onion Culture, an interesting illustrated article on the Onion Fly and its Prevention, by a distinguished Entomologist. It will be worth many times the price, to every one who raises this vegetable.

Sent post-paid for 21 cents, (seven 3-cent P. O. stamps.)
Address Publisher of American Agriculturist.

"Giving Away Papers."

An old subscriber in Pennsylvania, who "is anxious for the success of his favorite *Agriculturist*," inquires "if the publisher has not been caught napping; for," he says, "I saw them at our State Fair giving away twenty thousand copies of a paper published in New York, and as many more of another new paper, but I saw none of your agents on hand scattering the *Agriculturist*. Won't they get ahead of you?...."— We are not alarmed, good friend, and moreover, if we were, what should we do? The *Agriculturist* is published for its readers and paid for by them, and copies can not be thrown away at random. If we had a profitable agricultural Warehouse of our own, to advertise and puff, and were engaged in making a manure costing but little (and worth but little), but sold at a high price, we too could *give away* papers to anybody that would take them just as we would distribute advertising handbills. So also if we gave 16 pages of hastily thrown together reading matter, and filled the other 16 pages with advertisements, we could *give away* quite an edition.

But the fact is, we persistently eschew all other business, in order that we may be able to write and speak *independently* of all personal interest, and of course more reliably. So, also, we reject a large number of the advertisements offered, and especially those we deem unreliable, and thus save a large space for *reading* matter, which we endeavor to fill with choice, carefully prepared information. Our paper, engravings, and workmanship, are all of the best and most expensive character, and we look to the *sale* of papers for remuneration. Our friend referred to above, would not expect to see pearls and diamonds thrown around loosely. But neither he nor others, need have any fears for the *Agriculturist*, as we have none. We always mean to get up a paper that all can rely upon, and value for its own sake, and we have too much faith in the good sense and good judgement of cultivators, to doubt their full appreciation and support. When we do not *deserve* this, we ought not to have it.

Show Bills.

We have a new, large and beautiful *Agriculturist* SHOW BILL for 1860, illustrated with 42 engravings. Copies have been sent to several Post-Offices. Other copies will be forwarded, post-paid, to News Dealers, or others who may desire to use them in procuring subscribers.

PREMIUMS!

Improvement—Onward—Upward, is our motto. We intend to make each succeeding volume better than its predecessor, *in every respect.* During 1859 the *Agriculturist* has gone into more than 20,000 new families. We desire to extend its sphere of usefulness still wider, and to this end, we offer the following *premiums* to those who will assist in the work of extension. In selecting the articles, we have aimed to get such as are *useful*, and as have been most frequently called for by our readers.—*Each article offered is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be even better than those sold in the market at the prices named, when possible to select better.* Through the kindness of the manufacturers we get these articles for premiums, and for these only, at the bare cost of making, or we could not offer them as we do. The premiums are certainly liberal, when we take into the account the cost and character of the paper, and the low price at which it is furnished.

N. B. *These premiums are not offered for competition, but as direct* PAY *for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.*

☞ See remarks following the premiums, especially the first and last.

Premium I.—A liberal distribution of *valuable seeds* will be made during the Winter, to ALL regular subscribers alike, whether single or in clubs, and whether received from agents, or otherwise. (A seed depository will be established in California for the convenience of subscribers on the Pacific Coast.)

Premium II.—Every person sending in a club of 10 *new* subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII, or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 *new or old* subscribers at 80 cents each, will be entitled to 16 copies (that is one extra copy), for the coming year.

Premium V.—Every person sending 25 *new* subscribers at 80 cents each, will be entitled to the *three* Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 *new* subscribers at 80 cents each, will be entitled to a silver-cased *pocket Microscope*—with Coddington lens. Value $4. Sent by mail securely packed and post-paid. (See Premium 18.)

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary.* Price $6.50. It weighs 8½ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles. (Expense after leaving the city to be paid by recipient.)

Premium IX.—Every person sending 144 *new* subscribers at 80 cents each, (or 100 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines,** new from the factory, and of the very best make. There is no better working machine than this made, as we have proved by nearly two year's use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium XII.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present *Appleton's New American Encyclopædia,* now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Publisher's price, $45.

Premium XIII.—To every person sending 260 *new* subscribers at $1 each, or 330 at the lowest club price (80 cts. each), we will present one of *Allen's Mowing Machines,* with sundry improvements now being added. This is one of the best we have seen in operation. Price $115.

Premium XIV.—To every person sending 65 *new* subscribers, at 80 cents each, we will present one of the best *Eagle Plows* (2-horse). Price $11. This we believe is the best general farm plow in use.

Premium XV.—To every person sending 55 *new* subscribers at 80 cents each, we will present the best *Subsoil Plow* (two-horse), price $8; *or* one of the best *Horse-Hoes,* price $8; *or* one of the best *Straw and Hay Cutters,* price $8. These are all first quality, well-made, and useful implements.

Premium XVI.—To every person sending 48 *new* subscribers, at 80 cents each, we will present one of the best *Steel-tooth Cultivators.* Price $7.

Premium XVII.—To every person sending 45 subscribers at 80 cents each, we will present either the Dictionary, (premium 6), or one of the best *Hand Corn Shellers.* Price $6 50.

Premium XVIII.—To every person sending 30 subscribers at 80 cents each, we will present either the microscope, (premium 3,) or a *Double mold-board (ridging) Plow.* Price $3.50.

Premium XIX.—Books. Whenever desired, instead of other premiums, the publisher will pay premiums in books as follows: Every person making up a club of 20 or more *new* subscribers, may select any Agricultural or Horticultural Books from A. O. Moore's Catalogue, (which is advertised on page 316 of this month's paper) to the amount of 10 cents for every subscriber, sent in at 80 cents each. Persons making up a club for any of the premiums, and getting some names over the required amount, will be entitled to books for the surplus names. Thus, a person getting 55 subscribers can take for 45 names either premium VII, or XVII, and also $1 worth of books for the extra 10 names; and so in other cases.

[SPECIAL PREMIUMS.]

[Several young men have expressed to us a desire to secure for themselves a good *Watch.* There has been so much humbug and deception in articles of this kind that we have hitherto declined any such offers. However, to meet the oft repeated requests, we have concluded to for once make an offer of this kind. The *American Watch Company,* of Waltham, Mass., are putting up very valuable and reliable time-pieces, which we can offer with confidence, and we have arranged with the company to get the watches we desire, direct from the manufactory, of the best possible make and *bona fide* character. Each watch will be accompanied with a written *warrantee* direct from the Company; so that the watches we give, may be relied upon in every respect.]

Premium XX.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present either premium XII, or a $45 Silver Lever Watch, made by the American Company. The running works of this watch are of the same class as the $100 gold watches, jewelled, and chronometer balance. The case is a "Hunter," or closed one, the face opening by a spring. This is as good a watch as we would wish to carry. The price, $45, is as low as they can be bought at retail at the manufactory.

Premium XXI.—To every person sending 250 *new* subscribers at 80 cents each, (or 150 at $1 each), we will present a $75 Gold Lever Watch, of the same make as the above. The case is *gold,* Hunter, and *engraved.* No better watch than this can be obtained for $75 in this country.

REMARKS.—1. *The above premiums, except No. IV, are all for* NEW SUBSCRIBERS ONLY, *as we can only afford to pay premiums for once on the same subscriber. But* ☞ *in making up any premium lists, three renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one* NEW *name.* ☞ *Names need not all be at the same Post Office.*

2. Of course but one premium can be paid on the same name. The canvasser will choose his own premium. Any one striking for a higher premium, and failing to get names enough, can still fall back upon a lower one.

3. Every person collecting names for premiums can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender. These duplicate lists will be kept on file by themselves to be referred to in making up the premium when any person has completed sending in names for Volume XIX.

4. The above premiums are offered for new subscribers for Volume XIX (1860), whenever received. Canvassers will have three or four months for completing their lists, but the premium will be paid as soon as any list is made up.

5. The offer of extra copies to the subscribers themselves, when received before Dec. 1st, will greatly facilitate the work of the canvasser, and *now* is the most favorable time to *begin* the work of gathering names.

Catalogue of Seeds for Free Distribution in 1860.

Each person whose paid subscription to the American Agriculturist *extends beyond February,* 1860, *will be entitled to select four or five parcels of seeds from the general list given in the next column—if the following conditions be complied with.*

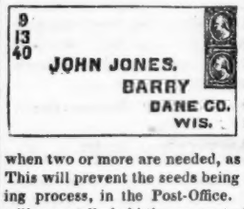
A. It is of absolute importance that the following directions be *strictly* followed, even to the minutest particulars. We have 93 distinct varieties of seeds, to be distributed among 70,000 or more persons scattered all over the country, which, at the best, will involve immense labor; and some mistakes must unavoidably occur, unless each subscriber take special pains to facilitate the work.

B. The seeds can be called for at the office, or be sent by express, or in ready prepared envelopes to be furnished by the subscribers, as described below.

C. Subscribers at different points can estimate whether they can receive their seeds cheapest by Mail to separate individuals, or in a package by Express.

D. If to go by Express, no envelopes will be needed In that case, simply send us a written list of the names, marking against each name the kinds of seed desired, *using the numbers in the Catalogue.* Keep a copy of the list sent, and give particular directions *on each list,* how the packcge is to be forwarded, and to whom directed.

E. If to go by *mail,* the applicant will (of course) furnish prepaid envelopes, of ordinary size, which should be prepared as in the engraving here given—that is: Put the figures corresponding to the Catalogue plainly on the upper left hand of the envelope, and put all the postage stamps upon the right side of the envelope—one above the other when two or more are needed, as shown in this pattern. This will prevent the seeds being crushed in the stamping process, in the Post-Office. One ordinary envelope will generally hold the amount of seed-packages carried by two or three stamps. ☞ *The amount of stamps can be calculated from the Catalogue. Single* 1-*cent stamps on letters are of no value, unless there be even threes of them, as letter postage is rated by the half ounce.*



F. Let all letters referring to seeds be as brief as possible, and yet plain. All such communications are referred directly to the clerk superintending that department. It especially desirable that whatever relates to seeds should be on a *separate* slip of paper. (We shall probably distribute over *three hundred thousand packages,* and a minute's time saved on each of these would amount to 500 working days of 10 hours each—or nearly two years!)

G. Canada subscribers will need to substitute 10-cent stamps in all cases where 3-cent stamps are named in the catalogue. When several send together, it will usually be cheaper to receive seeds by Express. (Postage is not necessarily prepaid *here,* on Canada letters.)

☞ Subscribers on the Pacific Coast will find special directions in regard to their seeds on page 352.

H. Always put the stamps upon the envelopes, and not drop them loosely into the enclosing letter.

I. It is always better to send envelopes of the ordinary size, and made after what is called the "Government pattern,"—that is, those in which the back comes under the piece lapping over; these seal up more firmly. This point is not essential, however.

J. Usually, the lighter the envelope the better, that more seeds may go under the same stamps.

K. Send only the number of stamps required for postage on the seed. We have no seeds of any kind to *sell.*

L. Those forwarding *unpaid* envelopes will of course not be disappointed if they do not return. We offer seeds *free,* but cannot, in addition, afford to pay postage also.

M. All seeds sent by mail are put up at our country residence, and each package is there mailed *direct,* to avoid its being overhauled at the Distributing offices.

N. ☞ We shall take time to mail all the seeds carefully and regularly. This will occupy the entire months of January and February. Those going to distant points

and to the Southward where the seasons are earlier, will be mailed first.

LIST OF SEEDS.

Field Seeds.

2—Improved King Philip Corn—Single, double, or triple packages, as may be desired, requiring one, two, or three 3-cent stamps.
3—Stowell's Sweet Corn—Same packages as No. 2.
94—Crystal Flint or Hominy Corn—Same as No. 2.
6—Ashcroft's Swedish Turnip—Half of 3-cent stamp.
7—River's Swedish Stubble Turnip— do. do.
70—Waite's London purple-top Swede Turnip—do.
98—Long Red Mangold Wurtzel—One 3-cent stamp.
101—Improved Long Orange Carrot—½ of a 3-cent stamp.

Vegetable or Garden Seeds.

8—Daniel O'Rourke Pea—Packages same as No. 1.
9—Champion of England Pea—One 3-cent stamp.
99—Prince Albert Pea— do. do.
57—Eugenie Pea— do. do.
58—Napoleon Pea— do. do.
12—Green Kohl Rabi—One-third of a 3-cent stamp.
13—Enfield Market Cabbage— do. do.
15—Mammoth Cabbage Lettuce— do. do.
63—London Particular Long Scarlet Radish—do.
64—Extra Red Round Turnip Radish— do.
100—Early Purple Cape Broccli— do. do.
21—Winter Cherry— do. do.
95—Hubbard Squash— do. do.
102—Mammoth Leghorn Squash—do. do.
108—Mammoth Pumpkin— do. do.
109—Mammoth Red Tomato— do. do.
72—Imported Brussels Sprouts— do. do.
76—Musk Melon— do. do.
77—Water Melon— do. do.
103—Sage— do. do.
104—Thyme— do do.
105—Chili Red Pepper— do. do.
106—Sweet Marjoram— do. do.
17—Red Strap-Leaf Turnip—One-half of a 3-cent stamp.
74—Solid White Celery— do. do.
75—Green Curled Endive— do. do.
55—White Globe Onion— do. do.
71—Long White French Turnip—One 3-cent stamp.
107—Giant Asparagus— do. do.

Flower, Fruit, and Ornamental Seeds.

89—Cotton Plant (2 kinds)—One 3-cent stamp.
90—Norway Spruce Seed—One-half of a 3-cent stamp.
91—Arbor Vitæ Seed— do. do.
112—Broad-Leaved Laurel— do. do.
111—Castor Oil Bean— do. do.
110*—New-Rochelle Blackberry—½ of a 3cent-stamp.

* (No. 110 is offered only in very small quantity, and only to those distant from access to the roots.)

On an average about five of the following 40 varieties will go under a 3-cent stamp.

23—Mignonette.
25—Mixed Nasturtiums.
27—Extra Cockscomb.
29—Double Balsams,mix'd.
30—Tassel Flower.
31—Chinese Pink.
32—Portulaccas, mixed.
33—Cypress Vine.
34—China Asters, mixed.
35—German Asters, mixed.
38—Sweet William.
40—Escholtzia Californica.
42—Foxglove.
47—Morning Glory, mixed.
49—Candytuft.
50—Schizanthus.
51—Phlox Drummondii.
78—Ageratum Mexicanum.
80—Yellow Hawkweed.
81—Canary Bird Flower.
82—Thunbergia.
83—Snap Dragon.
84—African Marigold.
85—Gaillardia, mixed.
86—Euphorbia, mixed.
87—Coreopsis.
113—Double Sun Flower.
114—Mixed Petunia.
115—Mix. Dbl. Hollyhocks
116—Mourning Bride.
117—Mix. Dbl. Wallflower.
118—Bee Larkspur.
119—M'dChrysanthemums
120—Clematis (Climber,)
121—Trumpet Creeper.
122—M'd Canterbury Bells
123—Gilia nivalis.
124—Whitlavia.
125—Ipomopsis (standing cypress).
126—Long-tubed Centranthus.

Agricultural Lectures, Discussions, etc., at Yale College, on a Grand Scale.

We are happy to announce the completion of the arrangements which have been in progress during many months past, for a grand agricultural gathering at Yale College, the coming Winter. It is proposed to have what may be termed a great agricultural "protracted meeting" to last through the month of February, or longer—say about thirty working days. The exercises are to consist of lectures by leading reliable men, eminent in the different departments of agriculture, horticulture, stock raising, etc. About a hundred lectures are provided for, two to four a day, each lecture being followed during the day and evening by conversational exercises, questions to the lecturers, and discussions. Twenty gentlemen have been addressed, and have consented to take part in the exercises as lecturers and teachers, including Cassius M. Clay, and Frederick Roche, etc., on Cattle; Dr. Gulliver, on Horses; C. L. Flint, and others, on the Dairy; Dr. Asa Fitch, on Entomology; the Hon. M. P. Wilder, Dr. Grant, and Mr. Barry, on Fruits; Professor Porter, on Organic Chemistry; Prof. S. W. Johnson, on Agricultural Chemistry; Jno. Stanton Gould, on Grasses and Irrigation; Judge French, on Draining; Professor Brewer, on Commercial Plants (flax, hemp, tobacco, etc.); Geo. B. Emerson, on Forest Trees; Dr. Comstock, on Fish Culture; Donald G. Mitchell (Ik Marvel,) on Rural Economy; &c., &c.

The exercises are to take place in the old Medical College buildings, now being newly fitted up with large lecture-rooms, for the use of the Scientific Department of Yale College. The arrangements are under the auspices of the College. The whole is to be free, except the nominal charge of say ten dollars, or less, to meet the necessary traveling expenses of lecturers, and other incidentals.

The plan reflects great credit upon the originator, Prof. John A. Porter, (Professor of Organic Chemistry, at Yale College,) who may be addressed at New-Haven, Conn., for full particulars. The occasion will doubtless be one of great interest to cultivators generally, and call together a very large attendance from all parts of the country.

Circulation of the Agriculturist.

The number of subscribers has constantly gone upward from the day we first obtained full proprietorship until the present time, so that it is now greater than ever before. Some interest has been manifested to know what is the *bona fide* circulation, and efforts have been made in some quarters to depreciate the amount. To set all queries and surmises at rest, we present the statement below which will not be questioned. To make out a fair show of the past, we give the average for a whole year. The present circulation is, of course, much larger (80,000 are to be printed of this November No.)

Steam Press Rooms, 16 & 18 Jacob-st.,
New-York, September 16th, 1859.

This is to certify that, by request of the proprietor, Mr. O. Judd, I have this day examined my books, and find that during the past *twelve months*, I have printed of regular copies of the *American Agriculturist*, **2,166** Reams of 500 sheets each (1,083,000), or an average of **180 1-2** Reams per month. As each copy contains two sheets, this is an average of **Forty-five thousand one hundred and twenty-five** (45,125) perfect copies per month JOHN A. GRAY.

Affirmed (sworn) to before me, this 16th day of September, 1859. J. O. HARGER, Commissioner of Deeds.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(invariably cash before insertion):

FOR THE ENGLISH EDITION ONLY.

Twenty-five cents per line of *space* for each insertion. About 9 words make a line, if undisplayed.
One whole column (143 lines) or more, $30 per column.
☞ Business Notices *Fifty* cents per line.

FOR THE GERMAN EDITION ONLY.

Ten cents per line of *space* for each insertion.
One whole column, (130 lines), or more, $11 per column
☞ Business Notices *twenty* cents per line.

FOR BOTH EDITIONS—ENGLISH AND GERMAN.

Thirty-one cents per line; $35 per column.
☞ Business Notices *Sixty-five* cents per line.

A STOUT AMERICAN BOY of 15 wishes to put himself with a truck farmer who raises early vegetables for market. He has some knowledge of farming. Apply to Mr. J. T. SHEPPARD, 17 Spruce-st., New-York.

WANTED.—Experienced Book Agents are wanted in each County in the United States and Canada to introduce *The New Illustrated Encyclopedia of all Nations*, one thousand engravings, many of them colored maps, charts, &c. For an appointment and for further information, apply immediately to HENRY BILL, Norwich, Con.

PROFITABLE Employment may be had by addressing (post-paid) R. SEARS 181 William-st, N. Y.

Premiums amounting to over $200, a chance to each subscriber.

BOYS AND GIRLS OWN MAGAZINE, containing moral and interesting tales, sketches, science, essays on given subjects, useful receipts, amusing pastimes. The young chess player, &c.

NOW IS THE TIME TO GET UP CLUBS FOR 1860—Our only terms; one copy for one year 75c.; five copies $3; ten copies, $5.50. published monthly—single numbers, 7c.
WILLIAM L. JONES, Publisher, 152 Sixth-av., New-York.

SCHOOL TEACHERS WANTED.—The subscriber wishes to engage the services of a few School Teachers to act as traveling Agents in introducing his publications. For particulars apply immediately to
HENRY BILL, Publisher, Norwich, Conn.

FORT EDWARD INSTITUTE, A Boarding Seminary, for ladies and gentlemen, superb brick buildings.
Winter Term opens December 1st, 1859.
Spring Term opens March 23, 1860.
Board at $2 per week. Tuition at corresponding rates.
Superior facilities for Music, Painting and French. Ladies graduating are GUARANTEED desirable situations to teach. Students received at any time, and charged only for the residue of the term. For Catalogues address
Rev. JOSEPH E. KING, A. M., Principal,
Fort Edward, N. Y.

FARMERS AND GARDENERS Sending their P. O. address to us will receive by mail gratis, our illustrated Almanac for 1860, and information concerning Agricultural Implements and Fertilizers. Send us the name and P. O address of good farmers in your town.
GRIFFING BROTHER & CO., 60 Cortlandt-st., N. Y.

NOW READY FOR DELIVERY SEVeral pairs of superior ESSEX Pigs, bred from stock of my own importation. SAML. THORNE,
Thorndale, Washington Hollow, Dutchess Co., N. Y

THE NEW YORK OBSERVER,

THE LARGEST NEWSPAPER IN THE WORLD

NATIONAL, CONSERVATIVE, RELIGIOUS;

BELONGING TO NO PARTY IN POLITICS, AND TO NO SECT IN RELIGION.

Edited by a Corps of Clergymen and Laymen of large experience, having the most Eminent Writers of the day among its regular Contributors, and a Foreign Correspondence unrivaled.

It is the most complete

FAMILY NEWSPAPER

that can be made; is published weekly on a large DOUBLE sheet—equal in the quantity of matter and paper weekly, to the Agriculturist—so that it may be separated, making

TWO DISTINCT PAPERS,

each perfect in itself. No other newspaper is made upon this plan.

The SECULAR sheet contains a full report of all the News of the Day; a vast amount of miscellaneous reading; poetry and prose; an AGRICULTURAL page, conducted by a practical and educated agriculturist; a COMMERCIAL page, edited by a gentleman distinguished for his acquaintance with the financial world—giving the latest reports of the MONEY, PRODUCE, and CATTLE MARKETS, BANK STOCKS, &c.; a MISCELLANEOUS department, embracing scientific, literary and artistic matter, with tales, anecdotes, biography, travels questions and answers, for the instruction and amusement of the family and social circle.

The RELIGIOUS paper is filled with the choicest original and selected matter in every department of Christian Literature; making a delightful Sabbath companion, and furnishing a volumn of interesting and instructive reading every week. The best and most accomplished Clergymen, Presidents and Professors in our Colleges and Seminaries, constantly contribute to its pages. One of its chief features of attraction is a Summary of intelligence from

ALL RELIGIOUS DENOMINATIONS:

a feature peculiar to the *Observer*, and highly valued by Christians who wish to know what is doing in other communions than their own.

One grand object of the NEW-YORK OBSERVER is to promote "peace on earth and good will among men." It cultivates harmony and good feeling among all DENOMINATIONS of Christians; and is a fearless defender of the rights of all men, under the Constitution of the United States and the Word of God.

Resisting radicalism in Church and State, promoting revivals of pure religion and every wholesome moral reform, on Scriptural and rational principles, discarding and opposing all humbugs, fanaticism, and every scheme of infidelity, socialism and vice, the NEW YORK OBSERVER designs to be a safeguard of virtue, law, and order, a champion of truth and righteousness in the earth.

It is the CHEAPEST newspaper of its class that is published. Both the secular and religious papers are sent for *two dollars and fifty cents*, in advance. Two families uniting in taking it, as many do, will each get a complete newspaper for $1 25!!!

PROPOSALS TO SOLICIT SUBSCRIBERS.

To any one who will obtain new subscribers for us, we will pay the following liberal commissions:—For five new subscribers *paying in advance*, fifty cents each; for more than five and less than ten, seventy-five cents each; for ten, or more, one dollar each. We will send a copy of our Bible Atlas, with colored maps, on paper of large size and best quality, to each new subscriber, on the receipt of his name and payment for one year.

If you cannot give personal attention to this work, will you show this advertisement to some clergyman or layman who will take an interest in it, to whom we will give the commissions mentioned above.

We will send specimen numbers without charge.

Your early attention is solicited to this subject, and we shall be happy to hear from you, immediately, as we desire to offer the paper at once to every family in the United States.

SIDNEY E. MORSE & CO.,
Editors and Proprietors,
37 Park Row, New-York.

A VALUABLE GIFT for any Boy or Girl: The Boys and Girls own Magazine, containing nearly 400 pages of the choicest reading, and illustrated with over 100 fine wood-cut illustrations, bound in muslin, with gilt stamp on back and side, price 90c., sent anywhere free of postage on receipt of that amount. WM. L. JONES, Publisher,
152 Sixth av., New-York.

THE BUILDING NEWS,

A WEEKLY JOURNAL

FOR THE BUILDER, ARCHITECT, FARMER, AND DEALER IN REAL ESTATE.

☞ Two Dollars per Annum

Published by JOHN HILLYER,

120 John-street, New-York.

Every Reader of the Agriculturist
Will please send for our new Catalogue of Pictorial Works, for the New Year 1860.
It will cost you nothing, being mailed free to all applicants.

EMPLOYMENT FOR THE NEW-YEAR 1860. PLEASE TO READ THIS—AGENTS WANTED.

All persons in want of employment will at once receive our catalogue of books for the New Year, prepaid, by forwarding us their address. Particular attention is requested to the liberal offers we make to all persons engaging in the sale of our LARGE TYPE QUARTO PICTORIAL FAMILY BIBLE, WITH ABOUT 1000 ENGRAVINGS. Our books are sold by canvassers, and well known to be the most saleable.

NOTICE TO AGENTS.—The season for selling books has now arrived, and we feel assured that our Illustrated Volumes are among the best adapted for general circulation, especially THE PICTORIAL FAMILY BIBLE. We wish competent Agents in all parts of the country to engage in the sale of it immediately. Send for a sample copy and try it among your friends. Those who have not the means, or do not wish to order a supply of books to commence with, can send us $6 (in a registered letter) carefully enclosed in a whole sheet of writing paper, and we will at once forward, prepaid, by Express to any central point, a copy of THE PICTORIAL BIBLE, with a bound subscription book and canvassing circulars, for securing the names of subscribers. With these he can get up a list, and afterwards order the Bibles to supply them with. Please address, post paid, ROBERT SEARS, Publisher,
No. 181 William st., New-York.

THE PLANTING SEASON FOR TREES

HAVING ARRIVED,

PARSONS & COMPANY

invite the attention of those about planting, to their large collection at

FLUSHING, L. I.

Our FRUIT TREES AND PLANTS are of vigorous growth, and the best quality, and the Ornamental Department contains EVERGREEN AND DECIDUOUS TREES, in great variety and of handsome form.

Those commencing or adding to their stock of GREEN-HOUSE PLANTS, will find with us all that they need. We have now a large and very choice collection of

Orchids,

many of them of great variety and beauty.

We deliver goods at Fulton market wharf free, and we invite purchasers to visit our grounds, or to select from the different Catalogues, which will be forwarded by mail, and can also be obtained at 179 Broadway, New-York.

LAWTON OR NEW ROCHELLE } **Blackberry**
NEW ROCHELLE OR LAWTON }

☞ PRICES REDUCED. ☜

The undersigned, Agents for Messrs. George Seymour & Co., and other first class cultivators, offer plants of the above remarkable fruit, at the following very low rates:

1000 plants....	$50 00	100 plants.....	$6 00	25 plants.....	$2 00
500 plants....	25 00	50 plants.....	3 50		

Warranted genuine. DREW & FRENCH,
Produce and Com. Merchants, No. 6 Erie Buildings.

☞ We have issued the seventh edition of our pamphlet, (22 pages.) on the History, Culture, and Success of this remarkable Fruit, containing full details of the results of the culture of the season just closed—which we will forward on receipt of nine cents in postage stamps.

NEW ROCHELLE OR LAWTON

BLACKBERRY SEED.

We offer for sale to those living at a distance, several quarts of the above Seed of the past season's growth.

We have reproduced the fruit from seed, several times, and in all cases it has proved fully equal to the original.

Price per quart.....$6 00
Price per package of 2000 seeds.....$1 00

GEO. SEYMOUR & CO.

South Norwalk, Ct., Sept. 21, 1859.

LAWTON BLACKBERRY.

For the original variety, for Circulars free, address
WM. LAWTON, New Rochelle, N. Y.

The Allen Raspberry.

The best *hardy* Raspberry in Cultivation—of large size, high flavor, and very productive.

"The Allen Raspberry is one of which a great deal may be expected, as exhibited with us, for its large size, bright red color, firmness for carriage, uniformity of yielding, and complete *hardiness*." *E. J. Hooper*, Sec. Cincinnati Horticultural Society in August Horticulturist.

The "Allen" took the first prize in a large competition of Raspberries at the Cincinnati Show in June last.

Geo. Seymour & Co., of Norwalk, Conn.—extensive berry growers—after trying fifty plants in bearing, ordered a thousand plants more of me, remarking that "for all good qualities combined, the "Allen" is the best raspberry we have seen or cultivated."

Wm. Parry, of Cinnaminson, N. J., near Philadelphia, ditto, substantially to Messrs. Seymour & Co.

"Our agent, one of the oldest fruit dealers in Washington Market, New-York, informs us, that no better raspberry comes into market than the 'Allen.'" H. & J. Carpenter, Poughkeepsie, N. Y.

Price $40 per 1000; $5 per 100; $1 per dozen plants, well packed, and sent per express, or other conveyance, as directed. Orders with money enclosed will be promptly answered.
LEWIS F. ALLEN.

Black Rock, N. Y., Sept. 1, 1859.

TRUE ALLEN RASPBERRY PLANTS,
Lawton Blackberry, Linnæus Rhubarb, Peach trees, etc. For sale low. Address EDWIN ALLEN,
New-Brunswick Nurseries, N. J.

MILTON OR NORTH RIVER ANTWERP RASPBERRY PLANTS for sale, at $11 per 1000 plants. This is the largest and best variety for market use. Address E. S. WOOLSEY, Milton, Ulster Co., N. Y.

BY MAIL — POST-PAID — GRAFTS, VINES and PLANTS, packed in moss or oiled silk:

Grafts of the Baker Apple at	$0 50 per dozen.
Concord Grape Cuttings	1 20 "
Concord Grape Vines, suitable for mailing	0 60 cts. each.
Delaware Grape Vines	2 50 "
New Rochelle or Lawton Blackberry Plants	0 75 per dozen.
Cabcon Pie Plants, crowns	1 00 "
Peabody, Wilson's Albany, McAvoy's Superior and other choice strawberries	0 75 "

Cash or stamps must accompany orders, which will be filled as soon as the season will admit. F. A. ROCKWELL.
Ridgefield, Conn., Nov. 1859.

Hardy Fruit Trees.

HIGHLAND NURSERIES, SYRACUSE, N. Y.

50,000 very fine 2 yr. Stand. and Dwarf Pear, $20 to $30 per 100.
10,000 extra fine 2 yr. Stand. Cherry, $12 per 100.
20,000 Isabella, Catawba, and Clinton Grape, strong, $50 to $80.
1",000 New Rochelle Blackberries, $40 to $60 per 1000.
200,000 Apple Roots, grafted to order, 10,000 for $50 in Spring.
5,000,000 Stocks—Apple 1 yr. $3; 2 yr. $4; extra, $5. Cherry, $5 to $6. Pear, $8 to $12. Anger's Quince, $10 to $12. Plum $12.

Also, Apple, Plum, and Peach, Quince, Currants, Raspberries, Strawberries, Roses, Mount. Ash, Horse Chestnut, Shrubbery, Bulbous Roots, &c., for sale cheap by
COWLES & WARREN.

LARGE STANDARD PEAR TREES FOR SALE,

At our Nursery we have a quantity of extra large Pear Trees of the most approved kinds, very thrifty, and all of them have been trimmed and transplanted, and therefore have splendid tops and roots. We also have a quantity of Apple, Cherry and Plum Trees, and a variety of other trees, vines, Shrubs, &c., (as above,) for sale by WICKHAM & BLOODGOOD,
Tioga, Tioga Co., Penn.

IONA ISLAND VINES.

A new edition of Descriptive Catalogue will be ready by the 15th, which will be sent to applicants sending a three cent stamp. It contains additional information relative to planting, training, and the management of vines, with a full and accurate description of all the valuable varieties with which I am acquainted that are now in market.

My facilities for propagating (including nearly an acre of glass) are extensive, and in consequence my plants generally, and especially the Delaware Vines, are this season of much better quality than I have before been able to offer.

Of LARGE DIANA VINES my stock is limited, but of surpassing excellence. Of Anna, the stock is also small, but plants of best quality; chiefly LARGE LAYERS ready for bearing.

For prices and full particulars see Catalogue.

Of DELAWARE VINES, besides very large Layers, I have a good stock of exceedingly vigorous plants grown in the open air, for such as may prefer them. Of these the wood and roots are very strong, and will be *thoroughly ripened early in the season.*

I would recommend the Herbemont as a most delicious grape, and a great acquisition to all gardens having a sheltered exposure not more than one degree north of latitude of New-York. A small stock of very large layers ready for bearing now for the first time offered.

Concord, a small stock of remarkably large layers for immediate bearing, as well as small vines. A good stock and very large plants of Rebecca. Cauby's August, which is synonymous with Cape, Alexander, York Madeira, Hyde's Elizabeth, Schuylkill Muscadel, Baldwin's Early, etc., a few layers. Of the following a very limited supply:

Allen's Hybrid, (a white grape equal to Chasselas,) Logan, Tokalon, (synonymous with Wyman, etc.,) Cassidy, Louisa, Elsingburg, Clara, Raabe, Lenoir, U. Village, Early Hudson, Garrigue's, Hartford Prolific, Emily.

Foreign Vines, a good stock—plants vigorous.

Downing's Everbearing Mulberry, a small stock of superior plants, 1 and 2 years old.

Newman's Thornless Blackberry, (best garden variety) a few hundred.

Wholesale Catalogue ready. C. W. GRANT,
IONA ISLAND, near Peekskill, Westchester Co., N. Y.

PREMIUM GRAPES.

THE GENUINE NORTHERN

MUSCADINE GRAPE

Has taken the First Premium at the State Fair, Albany, 1859, for producing four entire different qualities of rich high flavored wine, without the addition of any thing save a little sugar and water; five quarts of berries producing one gallon of wine, as we make it; the vine perfectly hardy, very productive, maturing four weeks earlier than the Isabella. We have repeatedly been offered $3 per gallon for the wine, and 20 cts. for the fruit. Will warrant no roots genuine that we do not raise in our own Nursery, as many have been sold under that name, entirely worthless.

All orders for this truly remarkable Wine Grape, for setting vineyards, either this Fall or next Spring, will be filled in rotation as they are received. Liberal discount to those purchasing in large quantities. Roots mostly two and three years old. Price from One Dollar to Three Dollars a single root, intended to produce fruit, if set this fall, next season. Cash to accompany the order. J. LEWIS. } Agents.
D. C. BRAINARD. }
New Lebanon, Columbia County, N. Y.

GRAPE VINES.—ISABELLA, CATAWba, and Northern Muscadine.—The subscribers being largely engaged in the Grape culture, now offer to the public several thousand Vines, in lots to suit purchasers, of their own raising, with prices according to age and quality. Particular attention paid to the forming of vineyards. Address
DEPEW'S NURSERIES, Nyack, Rockland Co., N. Y.
City reference, Mr. John W. Towt, No. 56 Beekman-st.

CHEAP GRAPE VINES.—All the best native and foreign vines at low prices. A large stock of Diana and Childs' Superb vines, two years old. One good plant each of the *Anna, Delaware, Diana, Concord, Hartford Prolific, Louisa,* and *Rebecca, for only* $5! Send for a priced Circular.
D. S. HEFFRON, Utica, N. Y.

HARTFORD PROLIFIC GRAPE—*Warranted genuine,*—Cuttings, $1.00 per dozen, (say 40 eyes); $2.00 per 2½ dozen,) say 100 eyes.) VINES, 1 year, 25 to 100 cts. each; 2 yrs. $1 50 to $2.00. D. S. DEWEY, Hartford, Conn.

RAVENSWOOD FRUIT GARDEN AND NURSERY.

Ravenswood, L. I., (near New-York.)

H. C. FREEMAN, (late Freeman & Kendall,) offers at wholesale and retail, a large and well grown stock of the following desirable plants, viz:

BRINCKLE'S ORANGE RASPBERRY.
MYATT'S LINNÆUS RHUBARB.
NEW ROCHELLE OR LAWTON BLACKBERRY.
DELAWARE AND REBECCA GRAPE VINES.
CHERRY CURRANTS,
DWARF PEAR TREES—of the best selected varieties, very fine, 2 year old trees.

Also, Newman's Thornless Blackberry, Black Naples Currants, &c. Address H. C. FREEMAN,
Care ANDREW BRIDGEMAN, 878 Broadway, N. Y. City.

Dutch Bulbous Roots.

Just published our Fall Catalogue of BULBS, containing our usual extensive assortment of
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TULIPS,
LILIES,
CROCUS,
NARCISSUS,
CROWN IMPERIALS, &c., &c.

Also *choice assortments* of the above for from $1 to $10 each made up. Catalogues mailed on application
J. M. THORBURN & CO., Seed Warehouse,
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R. F. NICHOLS, New-Orleans,
Importer of fine Cattle, and Wholesale Agent for several Fruit and Flower Nurseries.
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The proprietor of these Nurseries, the most extensive in the world, has the honor to inform his numerous friends and the public that his CATALOGUE OF FRUIT AND ORNAMENTAL TREES, SHRUBS, ROSES, SEEDLINGS, FRUIT STOCKS, &c., for the present season is now ready, and at their disposal. Apply as heretofore to
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FARM PRODUCE

Sold on Commission,

Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.
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Refers to the Editor American Agriculturist.
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A VALUABLE FARM FOR SALE—One-and-a-half miles east of this village on the Clinton river; 330 acres of choice land, with 200 acres improved; 2 large barns, 2 dwellings (1 of brick) 2 orchards of choice apples, 1 of pears, plums, cherries, &c. 20 miles from Detroit, by plank road, 1½ from railroad, and on a navigable river. Address
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GARDEN, FIELD, HERB, FLOWER, and FRUIT SEEDS.—The subscriber offers a large assortment of Garden, Field, Flower, Herb, and Fruit Seeds of American and Foreign growth, among which will be found
FRUIT SEED—Apple, Pear, Quince, Plum, Apricot, Cherry, Currant, Gooseberry, Raspberry, Strawberry, Peach, &c.
HEDGES—Honey Locust, Yellow Locust, Buckthorn, Osage Orange, Arbor Vitæ, &c.
GRASS SEEDS—Timothy, Red Top, Orchard, Blue, Rye or Rhy, Fowl Meadow, Sweet Vernal, Sanfoin, Agrostis Stoloniferæ, Hungarian, Millet, Lawn, Fescue, &c.
CLOVERS—Of all the varieties.
SCOTCH OATS—SPRING WHEAT—SPRING RYE, &c.
DUTCH BULBOUS ROOTS—Of all kinds, furnished.
FRUIT, ORNAMENTAL TREES and SHRUBS procured to order, (true to kind) from the most reliable sources, and forwarded, carefully packed, to any part of the country.
BOOKS—All works furnished at publisher's prices.
Especial care is taken that all seeds are *fresh* and true to their kind.
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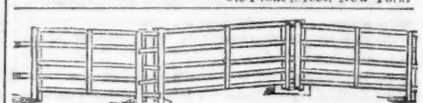

CARHART'S PORTABLE ZIGZAG, AND STRAIGHT FIELD FENCE. Patented March and Sept., 1858.

Awarded the First Premium at the United States Fair held this year at Chicago, Ill., also at the N. Y State Fair, held at Syracuse, Oct. 5th, 1858, where all the Portable Fences referred to in the October Agriculturist, page 393, were exhibited and in competion

For Descriptions, Terms, &c., see Circulars, which may be had of CARHART BRO'S, Syracuse, N. Y.

HAY PRESSES.—A VERY SUPERIOR ARTICLE R. L. ALLEN, 191 Water-st.

HAY AND STALK CUTTERS.—CORN SHELLERS, FAN MILLS, in great variety.
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BYRAM'S POTATO DIGGER—We have improved this implement so that it is easily converted into a *Double Mold-Board Plow*, which makes it the most useful implement in use. As a *Potato Digger* it has no equal.
Price of Combined Machine $8.
Manufactured and sold by
GRIFFING BROTHER & CO.,
60 Cortlandt-st., New-York City.

PLOWS, CAST IRON AND STEEL, for every variety of use. Harrows, Cultivators, Hay and Stalk Cutters, Grain Mills, Sugar Mills, Churns, Pumps, Sausage Cutters and Fillers, Fan Mills, Corn Shellers, Horse Hoes, Weeders, &c. Carts, Waggons, Wheel Barrows, Store Trucks, Road Scrapers, Horse Powers, Threshers, Cotton Gins, Field and Garden Rollers, Saw Machines, Hay Presses, Ox Yokes, Vegetable Cutters, &c., &c., in great variety, of most approved patterns, and at very lowest price that articles of similar quality are or can be furnished. R. L. ALLEN, 191 Water-st.

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Now is the time to buy these truly valuable machines. More than 500 of them have been sold in the last two years. Price $50 and $75, delivered in New-York. Warranted to give satisfaction. For circulars, containing full information. Address
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PRICE $40. COMPLETE.

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These machines are noiseless—run rapidly—sew from two spools, and form a seam of unequalled strength, beauty, and elasticity, which will not rip, even if every fourth stitch be cut. They are unquestionably the best in the market for family use. They will HEM, FELL, STITCH, RUN and BIND.

THEY WILL DO ANY THING THAT ANY OTHER MACHINE CAN DO.

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75	do.	do.	8.
100	do.	do.	12.
150	do.	do.	18.

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Excelsior Burr-stone Mill.

AGENCY NO. 45 GOLD-STREET, NEW-YORK.

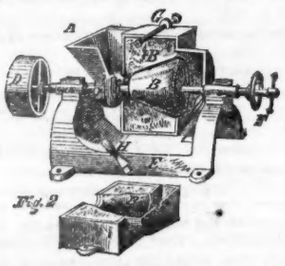

Fig. 2

The above cut represents the interior of our farm and plantation mill, it is offered for sale with the firm conviction that it perfectly meets the wants of farmers and planters, does splendid work with any horse power, and will last a life time; is so perfectly simple that any man of ordinary intelligence can run and keep it in order.

Buy no mill without examining the merits of this.

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Circulars describing Sanford's Anti-friction Horse Power—now for the first time offered for sale—also sent by

J. A. BENNET, Sole Agent.

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Root Cutters, Apple Parers, Corers and Slicers.

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Threshers and Threshers and Cleaners of the most approved pattern, R. L. ALLEN, 191 Water-st.

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Orders solicited.

Price list sent on application

C. & W. McCAMMON, Albany, N. Y.

Important to Farmers.
LEAVENWORTH
CORN HUSKER.

PATENTED JUNE 15, 1858.

PRICE 3 DOLLARS.

The Subscriber would respectfully call the attention of Farmers and Dealers in Agricultural Implements to this simple yet important invention.

Having made arrangements for the exclusive right to manufacture and sell this Husker for the State of New-Jersey, the Counties of Westchester, Putnam, Richmond, Kings, Queens, and Suffolk, in the State of New-York, he is now prepared to furnish them to Farmers and Dealers in quantities to suit.

Having been engaged for the last twelve years in the sale of Agricultural Implements, he flatters himself of his ability to distinguish between a useful invention and one of no practical utility, and confidently thinks that the Farmer will coincide with him, (after seeing the Husker in operation,) in pronouncing it the most simple and best Husker invented.

It combines with its simplicity the most perfect work of any machine yet invented for this purpose, and the extreme low price for which it can be afforded, (3 dollars,) brings it within the means of small as well as large Farmers.

It husks corn on the stalk as well as when taken off, affording a comfortable seat to the operator, and weighing only 18 pounds; it can be carried in one hand from place to place with perfect ease. A boy of ten years being able to do the work as well as a man.

The operator has merely to grasp the small end of the ear with the left hand, place the butt against the gauge, and with the right hand carry forward the lever with a quick motion, loosen the hold on the ear and carry forward the lever the length of the arm. By this simple operation the ear is taken out, leaving the husk on the stalks, and corn and husks are thrown in separate piles.

All persons wishing to purchase machines, will address H. R. WESTERVELT or E. H. REEVES, with JOHN McNALLY, Agricultural Warehouse, 197 Water-st., New-York.

☞ **Caution**—All persons are cautioned against purchasing or using Leavenworth's Corn Husker in the above territory, without the name of "H. R. Westervelt, N. Y." branded on each Machine, as none will be sold by him without the name burnt on, and no others can be sold without infringement.

IRON FINGER NAILS
For Husking Corn.

GOULD'S PATENT HUSKING THIMBLE is an effectual remedy for the excoriations common to husking corn by hand.—*Scientific American.*

We are in possession of more than 200,000 letters from farmers in high standing (in all parts of the United States,) equally as flattering as the following. *Read them* ye who have corn to husk, or wish to engage in the sale of good inventions:

J. H. GOULD & Co.—SIRS: I send inclosed one dollar for six pairs of your Patent Husking Thumbles. I used a pair last year, and I prefer them to all the great, small, or Little Giant Corn Huskers. Yours truly, A. H. BELL, Hillsboro, Montgomery Co., Ill., Nov. 27, 1858.

J. H. GOULD & Co.—Gentlemen: I send enclosed $1 for six pairs of your celebrated Husking Thimbles. I bought a pair of you last fall, and have used them for husking ever since; I will never tear my finger nails off husking while I can get them; they will out wear any thing of the kind I ever saw, and for husking they *can't be beat.* Yours, &c. WM. MORROW. Tiro, Crawford Co., Ohio, Nov. 8, 1858.

PRICES.

We send by mail, free of postage, to any P. O. address, six pairs of Husking thimbles, assorted sizes, directions for using, circular, &c., for $1; Circulars for one stamp. Fifty pairs by express for $5. Wholesale prices made known to applicants. *Agents wanted.* Address J. H. GOULD & CO., Alliance, Ohio.

MT. UNION, Ohio, July 19, 1858.

To the Public.—This certifies that I am personally acquainted with J. H. Gould, of Alliance Ohio; and feel free to state for the benefit of those whom it may concern, that he is of a good business character, able, honorable, and reliable. I would also state that his Invention, (the Husking Thimble,) stands very high in the estimation of agriculturists in this vicinity.

This Implement will doubtless bear the scrutiny of science and the practical operations for which it is designed.

Very respectfully, Prof. O. N. HARTSHORN, Pres. Mt. Union College

Keep your Feet Dry
AND
Preserve your Health.

The long sought for principle of making leather perfectly water-proof, without injuring it, has at last been discovered.

A. BROWER'S PATENT WATER PROOF COMPOSITION FOR LEATHER,

makes Boots, Shoes, Hose, Harness and all Leather perfectly impervious to water by a single application, and warranted to keep so, at the same time it softens, makes the leather pliable, prevents cracking, will polish with blacking better than before, and leather will last at least one-fourth to one-third longer by using it. For sale by A. BROWER & CO., 4 Reade-st., and by all the principal Boot and Shoe, Hardware, Druggist, Grocery and Yankee Notion houses. A liberal discount to agents.

N. B. None genuine unless signed by A. BROWER.

ITALIAN BEES. (*"Apis Ligurtica."*) I am happy to announce to the Bee Keepers of the U. S., that I have arrived safely with a few colonies of the purest Italian Bees to be found in Europe. I will be prepared to furnish the Queens in the ensuing season at the very low price of $12.50. Every order must be accompanied with $2.50 to insure sincerity. Due notice will be given when they are ready to send, at which time the $10 must be sent. It would not be advisable for persons using the common Box Hive, or any of the many swindle traps, called patent Bee Hives, as they can not without great care and attention be kept pure in such.

The Langstroth Hive is the only one adapted to preserve the insect in its original purity. Orders when received, will be numbered, and filled exactly as received, without favor.

P. J. MAHAN, No. 720 Chestnut-st., Philadelphia, Pa.

Cashmere Goats.

Persons interested in the history, introduction, or propagation of these rare and valuable animals, will be furnished with a pamphlet free of charge, on application by letter to RICHARD PETERS, Atlanta, Georgia.

CHOICE FOWLS.—I can spare a few of each of the following varieties, at reasonable prices, viz.: White-faced Black Spanish, Grey Dorkings, true Earl Derby Game with white legs and feet, English Black-breasted Red and English Black Game. Also, Aylesbury and Rouen Ducks, Bremen and brown China Geese, and a few of the large Improved Domestic Turkey. Send for priced Circular.

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FEMALE ALDERNEYS, and Ayreshires, thorough bred. For sale by ALFRED M. TREDWELL, 45 Fulton-st., N. Y.

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MERIDEN, CONN.

Has for sale a few pairs pure bred BLACK SPANISH FOWLS.

Thorough Bred Stock.

I have always on hand for sale, which will be put upon the railroad cars and sent carefully by Adams' Express to purchasers, SHORT-HORN CATTLE, SOUTH-DOWN SHEEP, and SPANISH HOGS. C. M. CLAY.

Address—"Whitehall Post Office." Madison County, Ky.

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SAPONIFIER,
OR
CONCENTRATED POTASH.

A new article for making Soap, warranted to make Soap without Lime, and with but little trouble. One pound will make 12 gallons of good strong Soft Soap. Manufactured and put up in 1, 2, and 4 lb. cans, (in small lumps,) at the CHALLENGE CHEMICAL WORKS, New-York,

E. R. DURKEE & CO., Proprietors, 181 Pearl-st., N.Y

ALSO,

PURE POTASH

in 6 lb. cans, in lumps, for sale as above.

GUANO.

We would call the attention of Guano Dealers, Planters, and Farmers to the article which we have on hand and for sale at

THIRTY PER CENT LESS THAN PERUVIAN GUANO

and which we claim to be superior to any Guano or fertilizer ever imported or manufactured in this country. This Guano is imported by WM. H WEBB, of New-York, from Jarvis' & Baker's Islands, in the "South Pacific Ocean," and is sold genuine and pure as imported. It has been satisfactorily tested by many of our prominent Farmers, and analyzed by the most eminent and popular Agricultural Chemists, and found to contain (as will be seen by our circulars) a large per centage of *Bone Phosphate of Lime and Phosphoric Acid*, and other animal organic matter, yielding ammonia sufficient to produce immediate abundant crops, besides substantially enriching the soil. It can be freely used without danger of burning the seed or plant by coming in contact with it, as is the case with some other fertilizers; retaining a great degree of moisture, it causes the plant to grow in a healthy condition, and as experience has proved, *free of insects.* For orders in any quantity, (which will be promptly attended to,) or pamphlets containing full particulars of analyses and tests of farmers, apply to

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For sale at $30 per ton of 2,000 lbs., and liberal discount will be made by the cargo.

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Dried Blood and Wool Manure.

A new and valuable Fertilizer, containing a large proportion of nitrogenous matter. Price $30 per ton, in barrels containing 200 lbs. No charge for package. Also, Peruvian and American Guano, Bone Dust, Phosphates, Plaster, &c.

R. L. ALLEN, New-York Agricultural Warehouse and Seed-store, 191 Water-st., New-York.

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SAWINGS, TURNINGS AND CRUSHED BONES for sale by the manufacturers, in large or small quantities.

A LISTER & CO., Tarrytown, Westchester Co., N. Y.

BONE DUST—Fine ground Bone Sawings and Turnings and coarse bone for graperies—warranted a pure article. Also Guano, Phosphate, and Blood and Wool, for sale at low rates. R. L. ALLEN, 191 Water-st

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THE SEED DISTRIBUTION.

Again we have the pleasure of offering to our subscribers for next year a list of seeds (embracing **93** kinds) from which every one is invited to select four or five parcels. (See page 348.) Since we originated this plan of distributing seeds free, nearly *half a million parcels have been sent out by us*, and we know that much has thus been done to diffuse the germs of useful plants, and beautiful flowers, all over the country. A very few seeds soon multiply and spread over a neighborhood, and thence still wider. Our parcels are necessarily small, but in every case there is enough to lay the foundation of future abundance. We spare no pains to get the purest and best seeds of each kind, which can be obtained both in this country and on the other side of the Atlantic.

Many New Seeds (Nos. 96 to 126) are added to our former list which will be described more particularly in the first number of the next Volume. We also retain in our list the more valuable varieties hitherto offered, for those who have not had them, and especially for those living in the remote States and Territories where seeds of any kind are difficult to be obtained. The seeds will be sent out during January and February, to subscribers for 1860. We offer them thus early that those renewing their own or sending in new subscriptions may at the same time send for the seeds.

Seeds for the Pacific Coast.

TO SUBSCRIBERS IN CALIFORNIA AND OREGON, AND IN WASHINGTON TERRITORY.

To save the heavy postage on seeds to the Pacific Coast, we propose to establish a Seed Depot in California, from whence the postage to Post offices in California and Oregon, and in Washington Territory will only be 3 cents per half ounce—the same as given in our list. If subscribers in those States will each send to us the list of such seeds as they desire (4 or 5 parcels each) with the required amount of postage (as given in the list) the seeds will be put up and mailed *in* California, to which place they will be forwarded in bulk by express at our own expense. The seeds will be forwarded by the steamer of Jan. 20th, (or perhaps Feb. 4th) and application should be made before that date, as none but those actually applied for can be sent at that time.—N. B.—Each subscriber sending for seeds to go in this package should write his or her name and full Post office address on a slip of paper, and note on it the numbers in our list standing against the several kinds desired, and enclose with it the amount of postage needed for the seeds. Of course any number of persons at one Post office can enclose their slips and stamps to us in the same letter.

We trust this effort to supply them with seeds at an extra cost, will be reciprocated on the part of our distant Western friends, by large additions of new subscribers.

"THE BAKER'S DOZEN"

One Month More.

We can not well AFFORD to change the offer that was made last month, in regard to extra numbers; but we are earnestly requested to continue the "Baker's Dozen" offer, by a large number of persons now engnged in getting up clubs of new subscribers, who say that they have commenced by promising the extra numbers, but have not yet completed their lists, and they ask for a little more time. We see no better way to accomodate all, than to hold open this offer for about a month longer, though we hope all who can do so, will send in their lists early this month, that the names may be properly enrolled, and the November number forwarded, before we begin mailing the Dec. No.

☞ Please let it be understood then:

The November and December number of this year will be presented, without charge, to ALL NEW subscribers for 1860 (Vol. 19), whose names reach us before Dec. 1st. This will still give new subscribers a "baker's dozen," or 14 months for the price of 12.—After Dec. 1st only *one* number will be presented, and none after January 1st.—*Exception.* Due allowance will be made in giving extra numbers, for the extra time required for new subscribers to come from the Pacific Coast, and other very distant points.

EXPLANATORY.—We have *three* motives for the above offer of extra numbers:—1st, as a premium or inducement to *new* subscribers—2nd, the extra numbers thus sent out early, are, by so far, specimens, and those who receive them usually show them to others, and thus *more* new subscribers are obtained—3d, by thus drawing in early subscriptions, we have more time to have them properly arranged in our books by our regular force of experienced clerks, than when all rush in at the beginning of the year, involving the extra expense and trouble of temporary inexperienced clerks.

Look over at the Premiums.

We invite special attention to the large list of premiums offered on page 348. These are peculiar. In most cases such premiums are offered for *competition*, and only one person can get a particular premium; and there is always an uncertainty as to whether some unknown person may not be better circumstanced to get a larger list, and a frequent suspicion also that favoritism may be in some way shown. Our premiums are *absolute*, depending only upon a given number of names, and every one knows just what he or she is aiming at. These premiums are really commissions offered to canvassers, for time expended in exhibiting the paper to those not acquainted with it. With the single exception of one of our old office clerks, Mr. Whitman, we employ no agents. Every person so disposed can act as a voluntary agent among acquaintances, and receive as compensation the articles offered in our premium list. The past year over 700 persons have earned and received valuable premiums from this office, which have cost them no money, and comparatively little outlay of time. We shall be happy to have the number doubled this year, for although no profit is derived the first year from new subscribers when these premiums are given, yet the sphere of the *Agriculturist* is extended, and sufficient remuneration will come by and by. We expect to make the paper *good enough* to retain the patronage of all its readers, and in the end to derive a living profit, which is all we desire.

An Interesting Announcement.

While the *Agriculturist* is chiefly devoted to subjects directly connected with out door and in-door rural labor, we think two or three of its ample pages may be profitably alloted to matter of a miscellaneous but instructive character. So, while 24 to 26 pages of each number are given up to the immediate subjects of agriculture, and horticulture, yet by cutting down the advertisements to the lowest practicable limit, we shall still have two to four pages for other matters of especial interest to all, farmers as well as others.

In this connection we have the pleasure to announce that we have made arrangements with a leading writer and editor in one of our most popular and widely circulated Magazines, to prepare for the *Agriculturist* a series of illustrated chapters, from one to two pages in each number, giving plain, simple, but interesting and instructive descriptions of *how various things in common use are made*, with all needful engravings to make the subjects plain even to children. Thus, the chapters will describe: How *Pins* are made; How *Needles* are made; How *Nails* are made; How *Matches* are made; How *Paper* is made; How *Glass* is made; How *Wire* is made; How *Soap* is made; How *Candles* are made; How *Starch* is made; How *Gun-Powder* is made; How *Coal Gas* is made; and so on of *Hats*, *Porcelain*, and many other articles.

With the skill of the writer, and our facilities for procuring good engravings, etc., we believe that this department, though occupying comparatively but a small portion of the paper, will alone be esteemed far beyond the small subscription price, by every class of readers.

American Agriculturist.

(ISSUED IN BOTH ENGLISH AND GERMAN.)

A THOROUGH GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; IN-DOOR and OUT DOOR work around the DWELLING; care of DOMESTIC ANIMALS &c &c.

The teachings of the AGRICULTURIST *are confined to no State or Territory, but are adapted to the wants of all sections of the country—it is, as its name indicates, truly* AMERICAN IN ITS CHARACTER.

The German edition is of the same size and price as the English, and contains all of its reading matter, and its numerous illustrative engravings.

TERMS—INVARIABLY IN ADVANCE.

One copy one year.....$1 00
Six copies one year.....5 00
Ten or more copies one year....80 cents each.

An extra copy to the person sending 15 or more names, at 80 cents each.

☞ In addition to the above rates: Postage to Canada 6 cents, to England and France 24 cents, to Germany 24 cents, and to Russia 72 cents *per annum*. Delivery in New-York city and Brooklyn, 12 cents a year.

Postage anywhere in the United States and Territories must be paid by the subscriber, and is *only six cents a year*, if paid in advance at the office where received.

The paper is considered *paid* for whenever it is sent, and will be promptly discontinued when the time for which it is ordered expires.

All business and other communications should be addressed to the Editor and Proprietor,

ORANGE JUDD,
No 189 Water st, New-York.